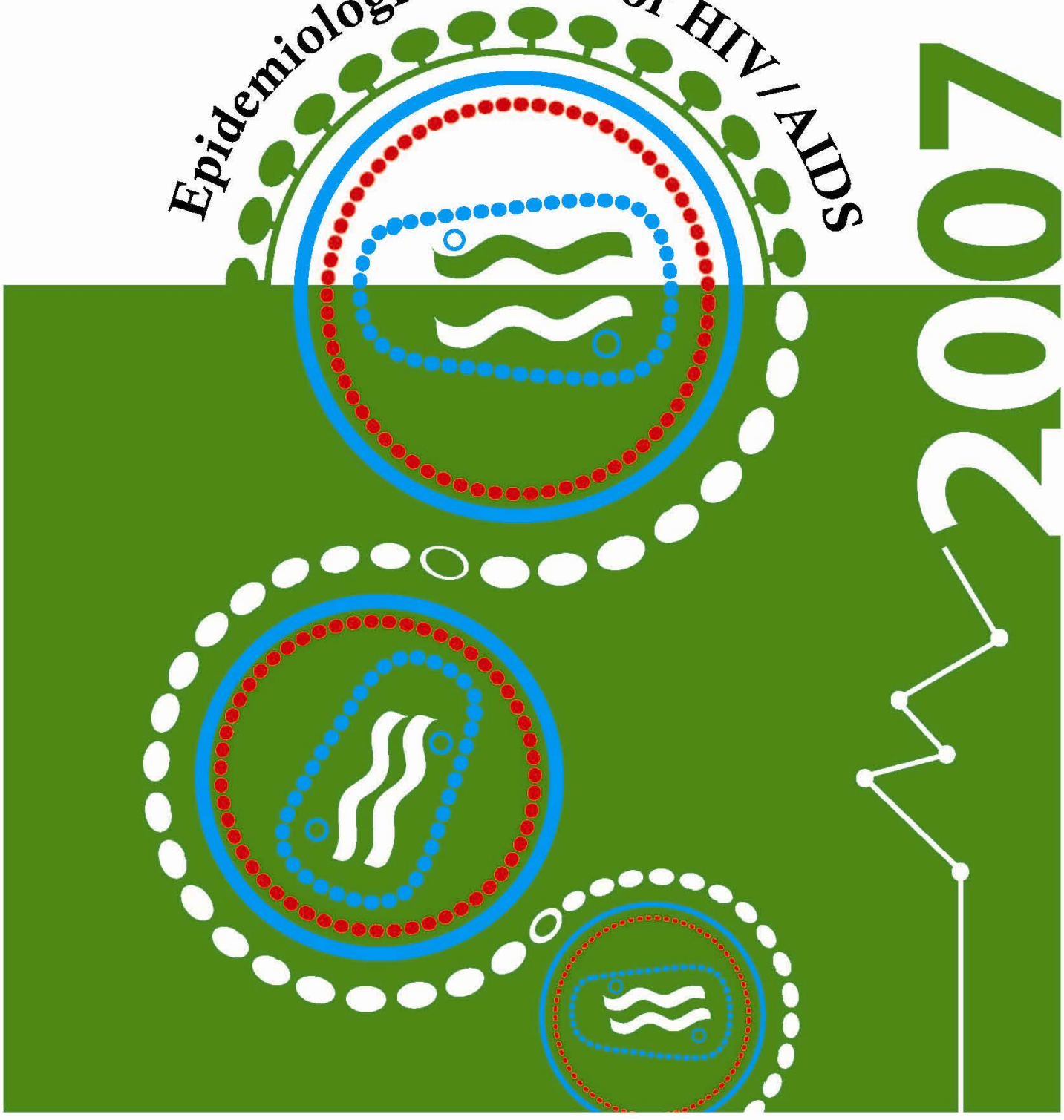
South Dakota

Epidemiologic Profile of HIV/AIDS



2007

South Dakota Department of Public Health
HIV/AIDS Surveillance Program

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EXECUTIVE SUMMARY

The HIV/AIDS epidemic continues to have an impact on the public health of South Dakota. Although there is still no cure for AIDS, recent advances in treatment have slowed the progression from HIV infection to AIDS to death. Cases diagnosed through 2006 and reported by January 8, 2007 are included in this report. Some of the most important facts and trends are:

- At the end of 2006, 325 persons were known to be living with HIV/AIDS in South Dakota, of whom 134 (39%) have been diagnosed with AIDS.

- As of December 31, 2006 a cumulative total of 529 persons have been diagnosed with HIV/AIDS in South Dakota with 313 (59%) of those cases having been diagnosed with AIDS.

- 162 individuals have died of AIDS in South Dakota since the epidemic began.

- In the most recent 2005 CDC HIV/AIDS Surveillance Report, South Dakota had the 2nd lowest rate for persons living with AIDS, 8th lowest in annual AIDS rates in 2005, and 4th lowest rank in new AIDS cases.

- During 2006, 34 new HIV/AIDS cases were diagnosed in South Dakota. New cases were diagnosed in 5 of the 66 counties in the state.

- The HIV/AIDS rates for Black persons and American Indians are disproportionately high. Although Black persons and American Indians respectively compose 1% and 9% of the South Dakota population, they make up 18% and 16% of people living with HIV/AIDS. Between 2000 and 2006, Black Americans and American Indians accounted for 24% and 23% of newly diagnosed HIV/AIDS cases, respectively.

- Since 2000, 36% of cases have been men who have sex with men (MSM), 22% have been injection drug users (IDU), and 20% have high risk heterosexual (HRH) contact as the exposure category.

- There has been a steady increase in the female percentage of newly diagnosed HIV/AIDS, with 35% of new cases in 2006 being female.

- 67% of persons diagnosed with HIV/AIDS since 1985 were in the 25-44 year old age group.

- 22% of the HIV or AIDS cases diagnosed since 2000 were foreign born persons.

- 62% of people living with HIV/AIDS in South Dakota live in Minnehaha or Pennington County.

- Of persons living with HIV/AIDS in 2006, 39% were not in care.

- Chlamydia, gonorrhea, and syphilis rates are highest among American Indian and Black persons. Chlamydia and gonorrhea rates are highest among persons 20-24 years of age in South Dakota.

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OVERVIEW OF HIV/AIDS SURVEILLANCE

The South Dakota Department of Health (DOH) receives funding from the Centers for Disease Control and Prevention (CDC) to collect information on HIV infection and AIDS diagnoses among South Dakota residents. The HIV/AIDS data are used to characterize and predict the changing epidemic at the local, regional, and national levels. South Dakota HIV/AIDS data are summarized annually to help the DOH to:

- Monitor the incidence and estimated prevalence of HIV/AIDS in the state;
- Assess the risks for HIV infection and develop effective HIV prevention programs;
- Assess the medical and supportive needs of those living with HIV/AIDS
- Develop surveillance methods to allow for a more current estimate and characterization of HIV/AIDS risks and needs;
- Justify necessary federal and state funding to support continued HIV/AIDS prevention, services, and surveillance activities.

This report includes HIV/AIDS data regarding South Dakota residents for the reporting period ending December 31, 2006. Consistent with HIV/AIDS surveillance activities in other states, the South Dakota HIV/AIDS surveillance actively maintains an extensive statewide network of reporting sites in public, private, inpatient, outpatient, clinical, and laboratory settings.

The HIV/AIDS Surveillance System

Core Surveillance

In South Dakota, AIDS became a reportable condition in 1985, at which time the South Dakota Department of Health established a surveillance system to track newly diagnosed AIDS cases. In 1993, the surveillance system was expanded when confidential HIV infection (non-AIDS) was added as a reportable condition. Standardized case report forms are used to collect sociodemographic information, mode of exposure, laboratory and clinical information, vital statistics (i.e. living or dead), and referrals for treatment of services. HIV surveillance data may underestimate the level of recently-infected persons because some infected persons either do not know they are infected or have not sought medical care. Persons who have tested positive at an anonymous test site, but have not been confidentially tested in a medical setting, are not included in HIV surveillance statistics. Therefore, HIV infection data can only provide minimum estimates of the number of persons known to be HIV-infected. Additionally, new cases are reported at all points along the clinical spectrum of disease when first diagnosed. Consequently, HIV infection data may not necessarily represent the characteristics of persons who have recently been infected with HIV.

Perinatal Surveillance

Perinatal HIV/AIDS surveillance is the ongoing and systematic collection of information on HIV-infected pregnant mothers and perinatally-exposed and HIV-infected children. Medical record abstractions are conducted for all HIV-exposed children and their mothers; the children are followed until their infection status is determined. These data address the prevention of perinatal transmission, including perinatal care, HIV counseling and testing during pregnancy, and the use of antiretroviral medications among pregnant mothers and newborns.

Behavioral Surveys

Youth Risk Behavior Survey (YRBS)
The YRBS is a biannual high school questionnaire that assesses six health risk behaviors: (1) behaviors that result in unintentional and intentional injuries, (2) alcohol and other drug use, (3) tobacco use, (4) sexual behaviors that result in HIV infection, other sexually transmitted diseases, and pregnancy, (5) dietary behaviors, (6) and physical activity. The YRBS is developed by the CDC and state Department of Education.

Behavioral Risk Factor Surveillance System (BRFSS)
The BRFSS is a CDC sponsored, state-based random digit-dialed telephone survey that monitors state, regional, and metropolitan-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Respondents are asked a variety of questions about their personal health behaviors and health experiences. Data from the BRFSS survey are population based; thus, estimates about testing attitudes and practices can be generalized to the adult population of South Dakota, not just to persons at higher risk for HIV/AIDS. However, because BRFSS respondents are contacted by telephone, the data are not representative of households without a telephone.

HIV Counseling and Testing Data

The South Dakota Department of Health HIV/AIDS program has six counseling and testing centers and provides funds to community based organizations around the state. Private HIV testing and counseling is provided by physicians in a variety of clinical settings.

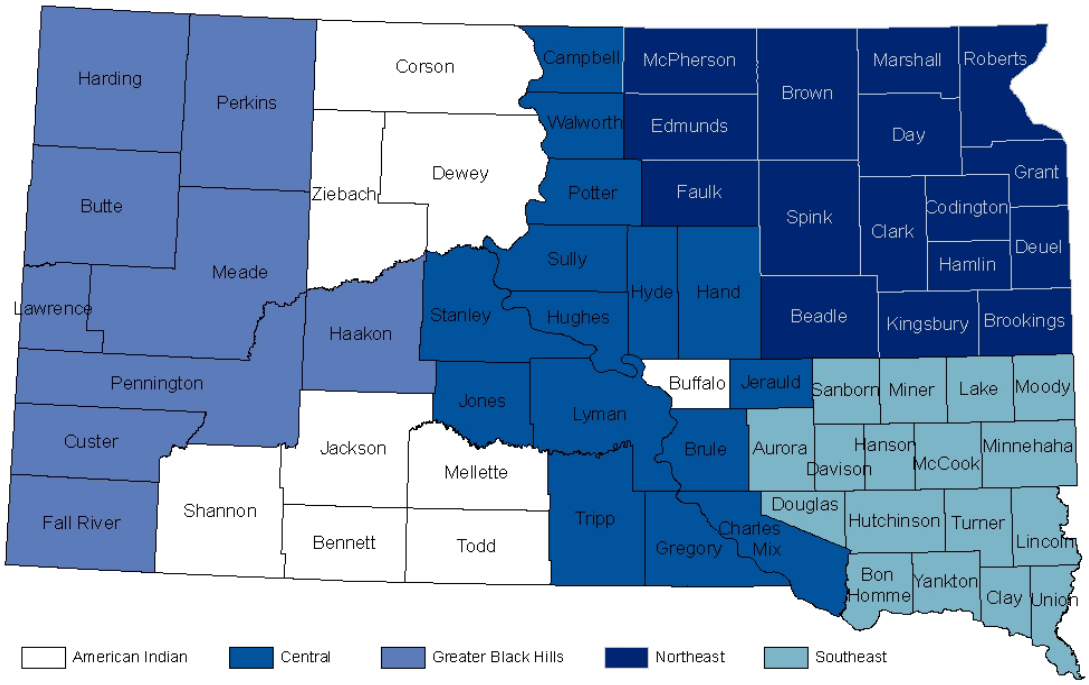
STD Surveillance

The Sexually Transmitted Disease (STD) Program offers STD clinical services, including testing, diagnosing and treating. The program conducts statewide surveillance to determine STD incidence and trends. In addition, the program conducts partner counseling and referral services for persons with HIV and STDs to reduce the spread of HIV and STDs. In South Dakota, in addition to HIV/AIDS, chancroid, Chlamydia, gonorrhea, herpes, lymphogranuloma venereum, and syphilis are reportable STDs.

Methods

A diagnosis of AIDS and/or HIV is legally reportable in South Dakota and must be reported to the Department of Health within 3 days of diagnosis. The South Dakota Department of health is authorized by SDCL 34-22-12 and 44:20 to collect and process mandatory reports of communicable diseases by physicians, hospitals, laboratories, and other institutions. These data are stored in the HIV/AIDS Reporting System (HARS) database. HARS data are continuously being updated. Statistics and trends presented in this report were derived from HIV/AIDS cases data reported to the South Dakota Department of Health cumulatively from 1985 through December 31, 2006. To protect the privacy of individuals diagnosed with HIV or AIDS, counties with five or fewer cases will be expressed as $\leq$5, regions with 3 or fewer cases will be represented as $\leq$3, and counties or regions with zero cases will be represented as 0. Data displayed as persons with HIV/AIDS should be interpreted as individuals who have either been diagnosed with HIV or AIDS the first time diagnosed, as some people may have progressed to AIDS before ever being diagnosed with HIV.

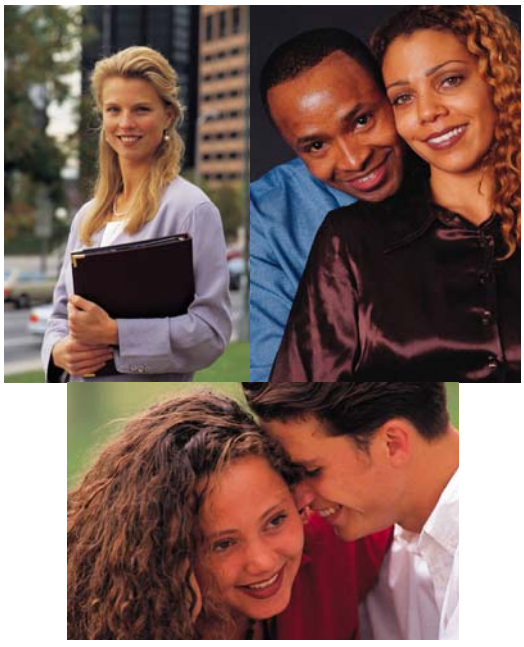
Figure 1. Geographic Guide to South Dakota HIV Planning Regions



American Indian Region counties					
Bennett	3,585	Dewey	6,161	Shannon	13,657
Buffalo	2,100	Jackson	2,858	Todd	9,882
Corson	4,366	Mellette	2,088	Ziebach	2,631
Greater Black Hills Region counties					
Butte	9,326	Haakon	1,912	Meade	24,623
Custer	7,904	Harding	1,218	Pennington	93,580
Fall River	7,355	Lawrence	22,395	Perkins	3,023
Central Region counties					
Brule	5,187	Hughes	16,875	Potter	2,351
Campbell	1,565	Hyde	1,614	Stanley	2,829
Charles Mix	9,194	Jerauld	2,136	Sully	1,430
Gregory	4,290	Jones	1,033	Tripp	6,065
Hand	3,307	Lyman	3,919	Walworth	5,494
Northeast Region counties					
Beadle	15,896	Deuel	4,296	Marshall	5,930
Brookings	28,121	Edmunds	4,112	McPherson	4,418
Brown	34,706	Faulk	2,386	Roberts	10,044
Clark	3,799	Grant	7,384	Spink	6,899
Codington	26,010	Hamlin	5,707		
Day	5,757	Kingsbury	5,532		
Southeast Region counties					
Aurora	2,901	Hutchinson	7,581	Moody	6,637
Bon Homme	7,087	Lake	11,039	Sanborn	2,541
Clay	12,995	Lincoln	33,381	Turner	8,520
Davison	18,777	McCook	2,617	Union	13,462
Douglas	3,309	Miner	2,584	Yankton	21,718
Hanson	3,747	Minnehaha	160,087		
Populations based on 2005 estimates					

Sociodemographic Characteristics of the Population of South Dakota

This section describes the sociodemographic, demographic, and socioeconomic status of the population of South Dakota.



SOCIODEMOGRAPHIC CHARACTERISTICS

Population

In 2005, the estimated population of the state of South Dakota was 775,933 persons[1]. With 75,844 square miles, South Dakota is the 16th largest state in land area and one of the least densely populated states[1]. South Dakota has 9.9 persons per square mile compared to the national average of 79.6 persons per square mile[1]. South Dakota is composed of 66 counties. Minnehaha County has the largest population with 160,087 residents[2]. The largest city in South Dakota, Sioux Falls, is in Minnehaha County and has 139,517 persons[3]. Over half (34) of the state's 66 counties are classified as frontier (less than 6 persons per square mile), while 31 are considered rural (6 to 99 persons per square mile). Minnehaha County is the only county classified as urban (100 or more persons per square mile). In the U.S. 79% of people live in urban areas, while 21% live in rural areas; whereas in South Dakota 52% of people live in urban areas and 48% of people live in rural areas[4].

Public Health Regional Structure

The South Dakota Department of Health is divided into four distinct geographic regions-Black Hills, Central, Northeast, and Southeast. Regional activities include clinical services for family planning, STD screening and treatment, maternal and child health, special health services for children, nutrition programs, and immunizations. Services also include sanitation, environmental monitoring, and epidemiologic investigation.

Demographic Composition

According to the 2005 Census Bureau data, the racial and ethnic composition of the state was estimated to be 88.5% White, 8.8% Native American, 0.8% Black, 0.7% Asian, and 1.2% other. Persons of Hispanic ethnicity were estimated to make up 2.1% of the population[1]. In 2000, there were 1.8% foreign born persons in South Dakota compared to the national average of 11.1%[1].

Age and Sex

In 2000, the median age of South Dakota residents was 35.6 years[5]. According to 2005 U.S. Census Bureau estimates, 6.7% of the population was younger than five years of age, 24.3% of the population was younger than 18 years of age; and 14.2% of the population was 65 or older. The percent of females and males in the overall population was similar (50.3% vs. 49.7%)[1].

Poverty, Income and Education

In 2005, the median household income in South Dakota was $43,151, compared to the national median household income of $46,326[6]. South Dakota's median household income was lower than five of its six bordering states and the United States[6]. A lower median household income is observed on American Indian Reservations when compared with the rest of the state[3]. Lincoln County has the highest median household income, $59,615, and Buffalo County the lowest median household income at $17,787[3]. In 2003, 12.4% of South Dakotans were estimated to live below the poverty level, compared with 12.5% nationally[1]. In 2004, 22.2% of children under the age of five in South Dakota lived in poverty, as compared to 20.5% nationally[3]. In 2004, nearly 20% of all children in South Dakota lived in poverty, with the vast majority living on American Indian Reservations in the middle of the state[3]. As of December, 2006, South Dakota had an unemployment rate of 3.2%, the seventh lowest in the nation[7]. In 2000, 84.6% of South Dakotans age 25 or over had a high school diploma as compared with 80.4% nationwide[1]. In 2006, the high school dropout rate was 1.9% for public schools and 6% for non-public schools[8].

DEMOGRAPHIC CHARACTERISTICS

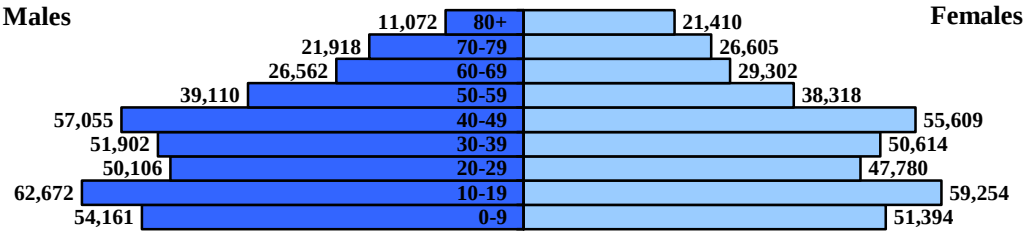
Sex and Age

The CDC recommends using six specific age groups when analyzing HIV/AIDS trends. The following table shows the South Dakota population distribution with respect to the CDC recommended age groups[9].

Table 1. Percentage Distribution of the General Population by Age Group and Sex South Dakota, 2000 Census

Age group (years)	Male, % (N=374,558)	Female, % (N=380,286)	Total Population, % (N=754,844)
<2	3%	3%	3%
2-12	16%	15%	16%
13-24	19%	18%	18%
25-44	28%	27%	27%
45-68	24%	24%	24%
≥69	10%	13%	12%

Figure 2. 2000 Population Distribution by Age in Years and Sex



There is a sharp decrease in the number of males and females in the 20-29 year old age group. This is most likely due to young people moving out of state for employment.

Race/Ethnicity

For the purpose of HIV planning and prevention, the following table displays the 2000 census data by sex for four race groups: American Indian, Black, Other, and White persons[9].

Table 2. Percentage Distribution of the General Population by Race and Sex South Dakota, 2000 Census

Race/Ethnicity	Male, % (N=374,558)	Female, % (N=380,286)	Total Population, % (N=754,844)
American Indian	9%	9%	9%
Black	1%	1%	1%
Other	2%	1%	2%
White	88%	89%	89%

In 2000, White persons accounted for 89% the population in South Dakota. American Indians composed 9% of the population, African Americans constituted 1%, and other races made up 2% of the population. Hispanic persons were 1.4% of the total population.

Race/Ethnicity by HIV Planning Regions

For the purpose of data analyses and HIV planning and prevention, the composition of each HIV planning region with respect to race and ethnicity is displayed below[4].

Table 3. Race/Ethnicity by HIV Planning Regions
South Dakota, 2000 Census

	Race/Ethnicity					
	American Indian	**Black**	**White**	**Other**	**Population Total**	**Hispanic**
Planning Region						
American Indian	77%	<1%	21%	2%	44,807	1%
Central	11%	1%	87%	2%	69,989	1%
Greater Black Hills	5%	1%	90%	4%	165,354	2%
Northeast	3%	<1%	95%	1%	172,667	1%
Southeast	2%	1%	95%	3%	302,027	2%

*Due to rounding, percentages may not add up to 100%.
**American Indian, black, white, and other races include Hispanic.

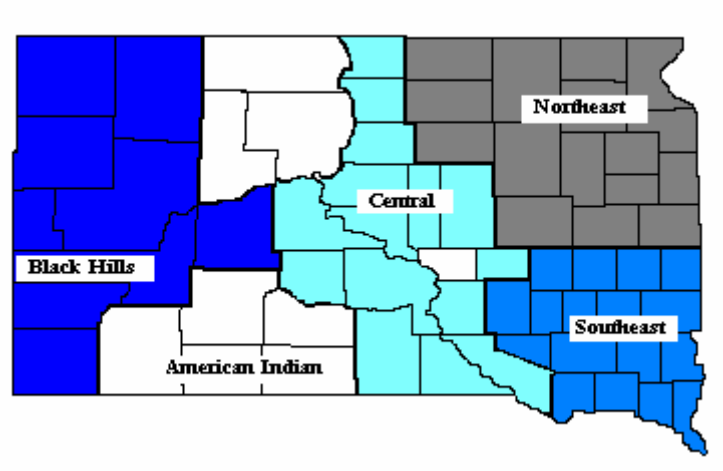
Populations of HIV Planning Regions

The 2005 population estimates were used for statistical analyses in the epidemiological profile. For the purposes of HIV planning and prevention, the population of each HIV Planning region is displayed in the table below[2].

Table 4. Populations of HIV Planning Regions
South Dakota, 2005 Estimates

American Indian Region	**47,328**	**6%**
Central Region	**67,289**	**9%**
Greater Black Hills Region	**171,336**	**22%**
Northeast Region	**170,997**	**22%**
Southeast Region	**318,983**	**41%**
Total	**775,933**	**100%**

HIV Planning Regions



HIV/AIDS Trends in South Dakota

This section describes the cumulative and recent trends of persons diagnosed with HIV/AIDS in South Dakota and those persons living with HIV/AIDS as of December 31, 2006.

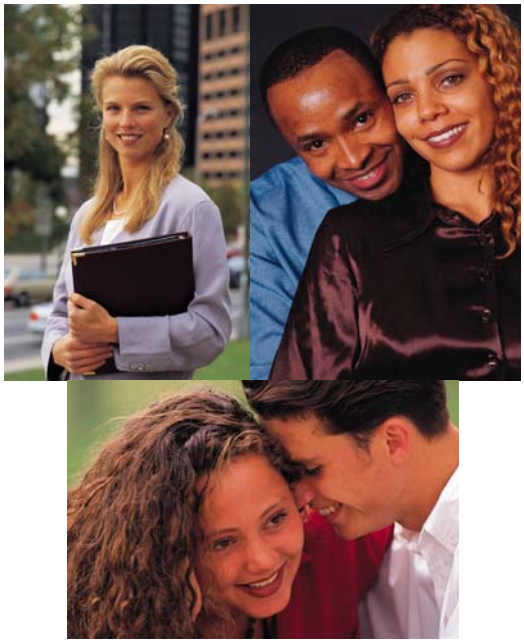
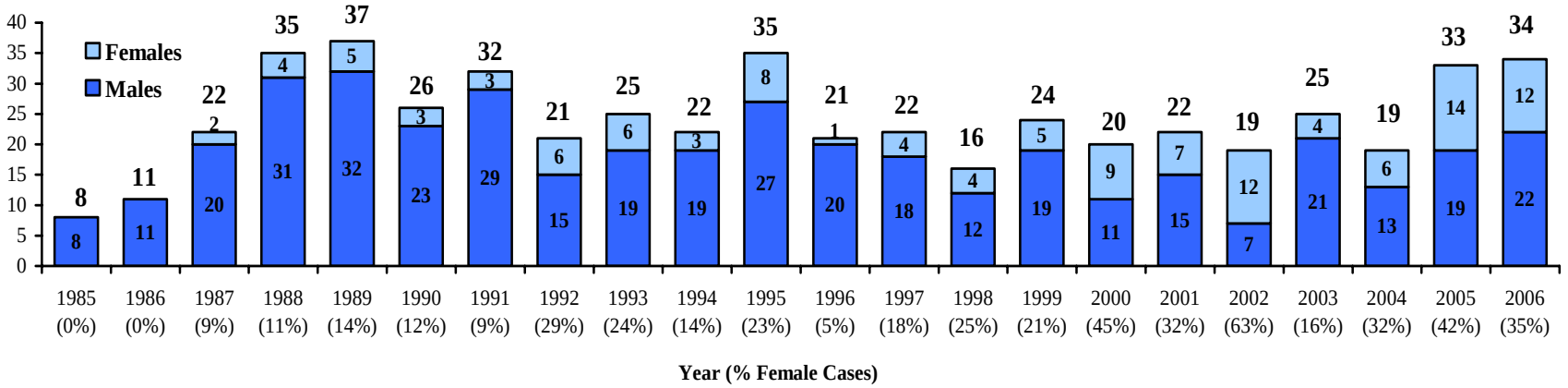


Table 5. Characteristics of South Dakota HIV/AIDS Cases as of December 31, 2006

	Diagnoses between 2000-2006 *Minimum estimate of persons diagnosed with HIV or AIDS*		Total HIV/AIDS Diagnoses *Cumulative number of persons diagnosed with HIV or AIDS (1985-2006)*		Persons Living with HIV/AIDS *Minimum estimate of persons living with HIV or AIDS (2006)*	
	Cases	**Percent[a]**	**Cases**	**Percent**	**Cases**	**Percent**
TOTAL	172	100%	529	100%	325	100%
Sex						
Male	108	63%	411	78%	232	71%
Female	64	37%	118	22%	93	29%
Ethnicity						
American Indian	40	23%	85	16%	52	16%
Black	42	24%	67	13%	60	18%
Hispanic and Other[b]	10	6%	20	4%	14	4%
White	80	47%	357	67%	199	61%
Country of Origin						
United States	134	78%	480	91%	279	86%
Other	38	22%	49	9%	46	14%
Age Group	(Age at HIV Diagnosis)		(Age at HIV Diagnosis)		(Age at HIV Diagnosis)	
< 2 years	2	1%	7	1%	4	1%
2-12 years	1	1%	6	1%	5	2%
13-24 years	20	12%	75	14%	50	15%
25-44 years	106	62%	352	67%	208	64%
45-68 years	43	25%	89	17%	58	18%
Exposure Category						
Heterosexual	62	36%	101	19%	82	25%
IDU[c]	33	19%	83	16%	55	17%
MSM[d]	47	27%	227	43%	116	36%
MSM & IDU	3	2%	21	4%	8	2%
Perinatal/Pediatric	3	2%	14	3%	10	3%
Transfusion/Hemophilia	0	0%	18	3%	8	2%
Unspecified	24	14%	65	12%	46	14%
HIV Planning Region						
American Indian	4	2%	16	3%	13	4%
Black Hills	38	22%	159	30%	101	31%
Central	5	3%	25	5%	11	3%
Northeast	17	10%	54	10%	21	6%
Southeast	108	63%	266	50%	179	55%
Unknown/Other[e]	0	0%	9	2%	0	0%
Facility of Diagnosis						
Private	83	48%	273	52%	151	46%
Public	89	52%	256	48%	174	54%

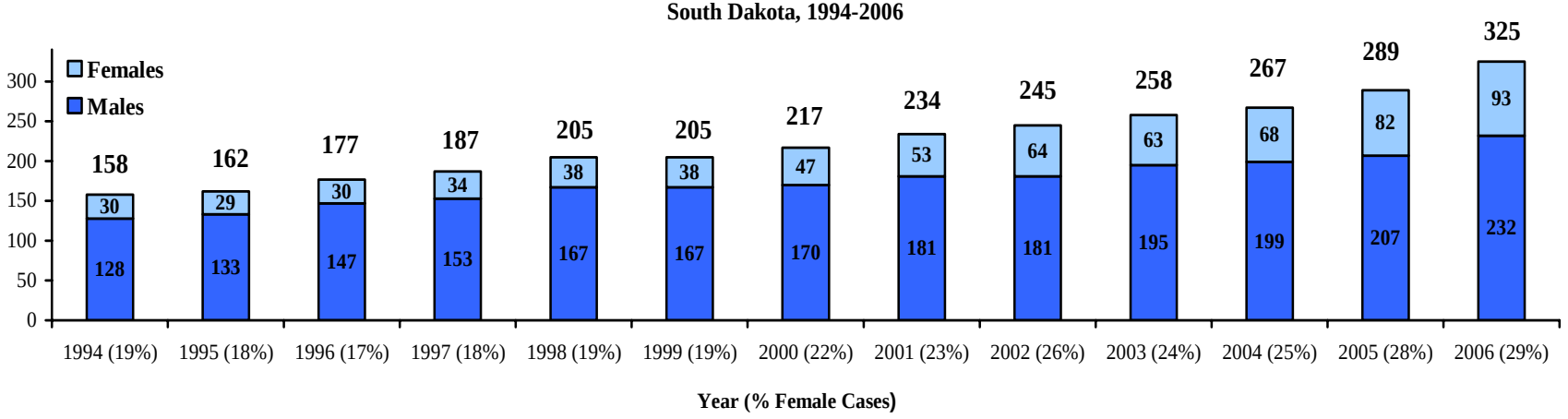
a. Due to rounding, percentages may not add up to 100%.
b. Hispanic and Other denotes cases that are Asian, Hispanic, or Multi-race.
c. IDU denotes injection drug use.
d. MSM denotes men who have sex with men.
e. Unknown/Other denotes cases in which the HIV/AIDS county is unknown or in a state other than South Dakota.

Figure 3. HIV/AIDS Cases by Sex and Year of Diagnosis
South Dakota, 1985-2006



In 2006, 34 new HIV/AIDS cases were diagnosed in South Dakota. The percentage of new female HIV/AIDS cases diagnosed has increased steadily since 1985. One person from the year 1984 was placed in the 1985 group.

Figure 4. Males and Females Living with HIV/AIDS
South Dakota, 1994-2006



The number of persons and percentage of females living with HIV/AIDS has increased over the past decade. At the end of 2006, 325 persons were known to be living with HIV/AIDS in South Dakota, of whom 134 (41%) had progressed to AIDS. This increasing trend is largely due to the introduction of effective drug therapies that have prolonged the lives of persons with HIV/AIDS.

Table 6. Characteristics of HIV/AIDS Cases by Age at Diagnosis, as of December 31, 2006

	0-1 years		2-12 years		13-24 years		25-44 years		45-68 years		
	Cases	%[a]	Cases	%	Cases	%	Cases	%	Cases	%	**Total**
TOTAL	7	1%	6	1%	75	14%	352	67%	89	17%	**529**
Sex											
Male	3	43%	5	83%	53	71%	280	80%	70	79%	**411**
Female	4	57%	1	17%	22	29%	72	20%	19	21%	**118**
Ethnicity											
American Indian	3	43%	1	17%	10	13%	54	15%	17	19%	**85**
Black	1	14%	1	17%	15	20%	44	13%	6	7%	**67**
Hispanic/Other[b]	1	14%	0	0%	6	8%	7	2%	6	7%	**20**
White	2	29%	4	67%	44	59%	247	70%	60	67%	**357**
Origin											
United States	5	71%	5	83%	64	85%	323	92%	83	93%	**480**
Other	2	29%	1	17%	11	15%	29	8%	6	7%	**49**
Planning Region											
American Indian	0	0%	<3	NA	<3	NA	8	2%	6	7%	**16**
Black Hills	0	0%	<3	NA	22	29%	108	31%	27	30%	**159**
Central	<3	NA	0	0%	<3	NA	19	5%	4	4%	**25**
Northeast	0	0%	0	0%	10	13%	32	9%	12	13%	**54**
Southeast	6	86%	<3	NA	39	52%	178	51%	40	45%	**266**
Unknown/Other[c]	0	0%	0	0%	<3	NA	7	2%	0	0%	**9**
Exposure											
Heterosexual	0	0%	0	0%	18	24%	69	20%	14	16%	**101**
IDU[d]	0	0%	0	0%	9	12%	61	17%	13	15%	**83**
MSM[e]	0	0%	0	0%	25	33%	166	47%	36	40%	**227**
MSM & IDU	0	0%	0	0%	3	4%	17	5%	1	1%	**21**
Perinatal	7	100%	6	100%	1	1%	0	0%	0	0%	**14**
Transfusion	0	0%	0	0%	8	11%	7	2%	3	3%	**18**
Unspecified	0	0%	0	0%	11	15%	32	9%	22	25%	**65**
Facility											
Private	4	57%	5	83%	34	45%	178	51%	52	58%	**273**
Public	3	43%	1	17%	41	55%	174	49%	37	42%	**256**

a. Due to rounding, percentages may not add up to 100%.
b. Hispanic/Other denotes cases that are Asian, Hispanic, or Multi-race.
c. Unknown/Other denotes cases in which the HIV/AIDS county is unknown or in a state other than South Dakota.
d. IDU denotes injection drug use.
e. MSM denotes men who have sex with men.

Table 7. Characteristics of HIV/AIDS Cases by Race, as of December 31, 2006

	American Indian		Black		Hispanic/Other[b]		White		
	Cases	%[a]	Cases	%	Cases	%	Cases	%	**Total**
TOTAL	85	16%	67	13%	20	4%	357	67%	**529**
Sex									
Male	57	67%	38	57%	15	75%	301	84%	**411**
Female	28	33%	29	43%	5	25%	56	16%	**118**
Diagnosis Age									
< 2 years	3	4%	1	1%	1	5%	2	1%	**7**
2-12 years	1	1%	1	1%	0	0%	4	1%	**6**
13-24 years	10	12%	15	22%	6	30%	44	12%	**75**
25-44 years	54	64%	44	66%	7	35%	247	69%	**352**
45-68 years	17	20%	6	9%	6	30%	60	17%	**89**
Origin									
United States	85	100%	27	40%	12	60%	356	100%	**480**
Other	0	0%	40	60%	8	40%	1	0%	**49**
Planning Region									
American Indian	13	15%	0	0%	0	0%	<3	NA	**16**
Black Hills	35	41%	<3	NA	6	30%	115	32%	**159**
Central	7	8%	<3	NA	0	0%	17	5%	**25**
Northeastern	7	8%	6	9%	<3	NA	40	11%	**54**
Southeastern	22	26%	56	84%	13	65%	175	49%	**266**
Unknown/Other[c]	1	1%	<3	NA	0	0%	7	2%	**9**
Exposure									
Heterosexual	26	31%	32	48%	7	35%	36	10%	**101**
IDU[d]	17	20%	7	10%	6	30%	53	15%	**83**
MSM[e]	24	28%	8	12%	3	15%	192	54%	**227**
MSM & IDU	4	5%	0	0%	0	0%	17	5%	**21**
Perinatal/Pediatric	4	5%	3	4%	1	5%	6	1%	**14**
Transfusion	1	1%	0	0%	0	0%	17	5%	**18**
Unspecified	9	11%	17	25%	3	15%	36	10%	**65**
Facility									
Private	23	27%	35	52%	8	40%	207	58%	**151**
Public	62	73%	32	48%	12	60%	150	42%	**174**

a. Due to rounding, percentages may not add up to 100%.
b. Hispanic/Other denotes cases that are Asian, Hispanic, or Multi-race.
c. Denotes cases in which the HIV/AIDS county is unknown or in a state other than South Dakota.
d. IDU denotes injection drug use.
e. MSM denotes men who have sex with men.

Table 8. Characteristics of HIV/AIDS Cases by HIV Planning Region, as of December 31, 2006

	American Indian		Black Hills		Central		Northeast		Southeast		Other/Unknown[c]		
	Cases	%[a]	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	**Total**
TOTAL	16	3%	159	30%	25	5%	54	10%	266	50%	9	2%	**529**
Sex													
Male	13	81%	123	77%	18	72%	44	81%	204	77%	9	100%	**411**
Female	≤3	NA	36	23%	7	28%	10	19%	62	23%	0	0	**118**
Ethnicity													
American Indian	13	81%	35	22%	7	28%	7	13%	22	8%	1	11%	**85**
Black	0	0%	≤3	NA	≤3	NA	6	11%	56	21%	1	11%	**67**
Hispanic/Other[b]	0	0%	6	4%	0	0%	≤3	NA	13	5%	0	0%	**20**
White	≤3	NA	115	72%	17	68%	40	74%	175	66%	7	78%	**357**
Origin													
United States	16	100%	157	99%	25	100%	51	94%	222	83%	9	100%	**480**
Other	0	0%	≤3	NA	0	0%	≤3	NA	44	17%	0	0%	**49**
Diagnosis Age													
< 2 years	0	0%	0	0%	≤3	NA	0	0%	6	2%	0	0%	**7**
2-12 years	≤3	NA	≤3	NA	0	0%	0	0%	≤3	NA	0	0%	**6**
13-24 years	≤3	NA	22	14%	≤3	NA	10	19%	39	15%	2	22%	**75**
25-44 years	8	50%	108	68%	19	76%	32	59%	178	67%	7	78%	**352**
45-68 years	6	38%	27	17%	4	16%	12	22%	40	15%	0	0%	**89**
Exposure													
Heterosexual	≤3	NA	33	21%	4	16%	13	24%	49	18%	0	0%	**101**
IDU[d]	≤3	NA	25	16%	4	16%	4	7%	49	18%	0	0%	**83**
MSM[e]	9	56%	65	41%	11	44%	27	50%	109	41%	6	67%	**227**
MSM & IDU	≤3	NA	6	4%	4	16%	≤3	NA	9	3%	0	0%	**21**
Transfusion	≤3	NA	≤3	NA	≤3	NA	0	0%	10	4%	0	0%	**14**
Perinatal/Pediatric	0	0%	7	4%	0	0%	4	7%	7	3%	0	0%	**18**
Unspecified	≤3	NA	21	13%	≤3	NA	5	9%	33	12%	3	33%	**65**
Facility													
Private	4	25%	77	48%	13	52%	34	63%	140	53%	5	56%	**273**
Public	12	75%	82	52%	12	48%	20	37%	126	47%	4	44%	**256**

a. Due to rounding, percentages may not add up to 100%.
b. Hispanic/ Other denotes cases that are Asian, Hispanic, or Multi-race.
c. Unknown/Other denotes cases in which the HIV/AIDS county is unknown or in a state other than South Dakota.
d. IDU denotes injection drug use.
e. MSM denotes men who have sex with men.

HIV/AIDS Diagnosis Year by Planning Region, 1985-2006

(See page 29 for maps of HIV/AIDS diagnosis by County since 1985.)

Figure 5. HIV/AIDS Diagnosis by Year in American Indian Region (n=16)

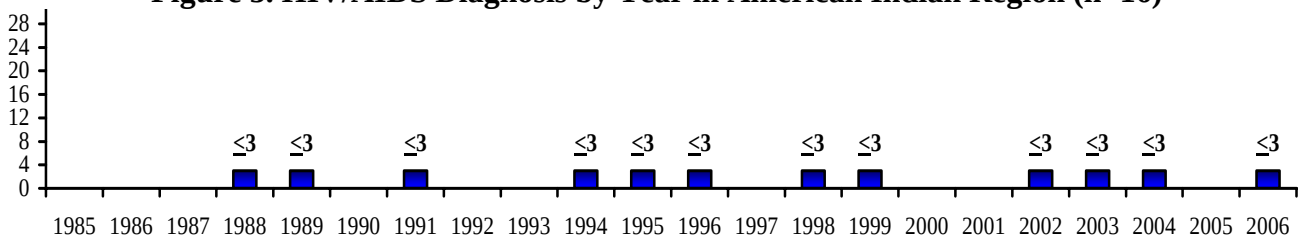


Figure 6. HIV/AIDS Diagnosis by Year in Black Hills Region (n=159)

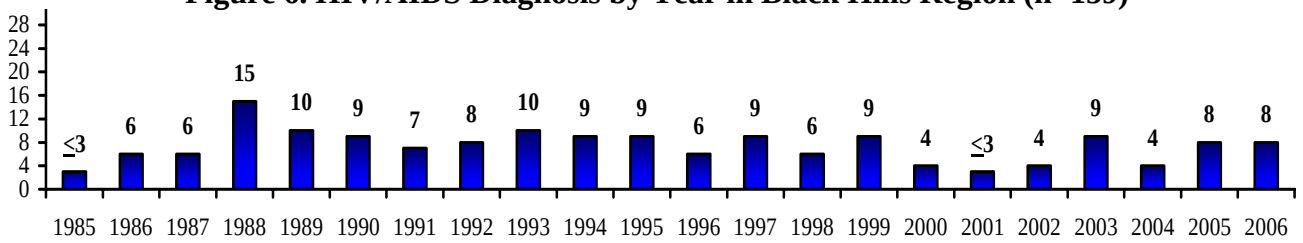


Figure 7. HIV/AIDS Diagnosis by Year in Central Region (n=25)

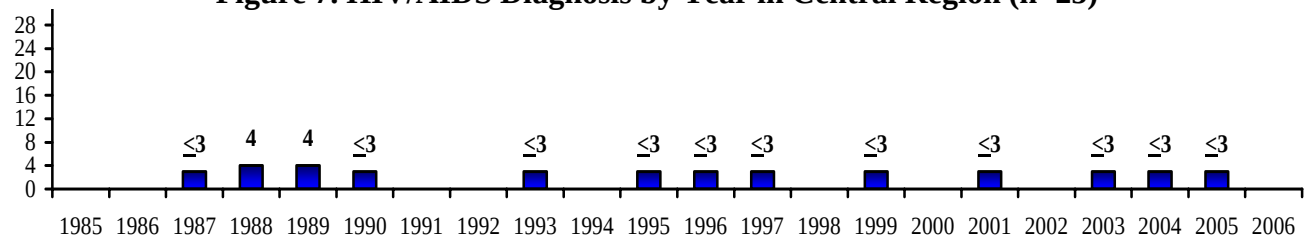


Figure 8. HIV/AIDS Diagnosis by Year in Northeast Region (n=54)

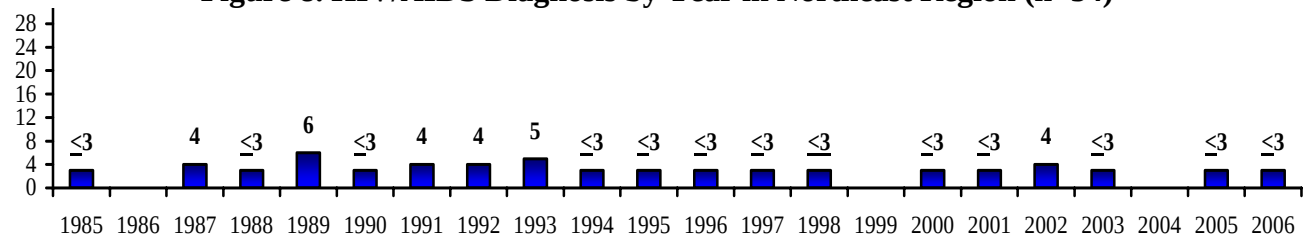
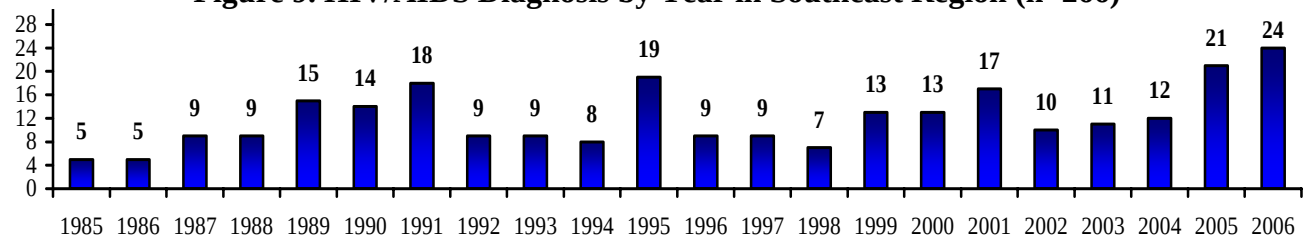


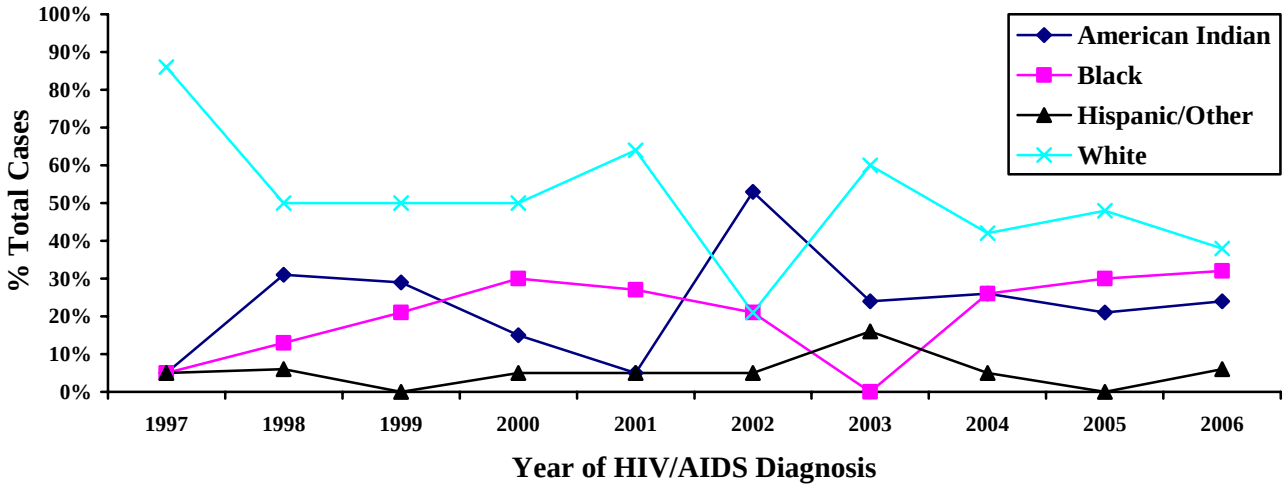
Figure 9. HIV/AIDS Diagnosis by Year in Southeast Region (n=266)



HIV/AIDS CASES BY RACE/ETHNICITY AND SEX

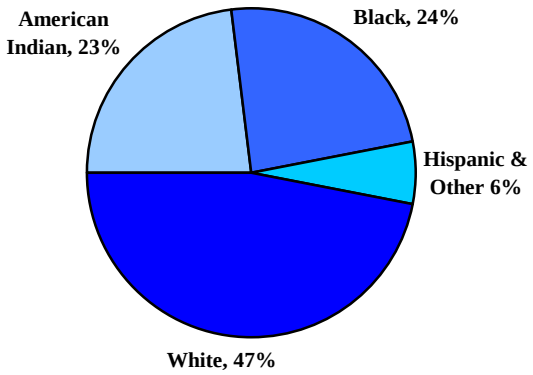
The HIV/AIDS epidemic impacts persons of all genders, ages, ethnicities, and geographic locations in South Dakota. This impact, however, is not consistent across all population groups. At the beginning of the epidemic, HIV cases rose most sharply in white men who have sex with men (MSM). Although white MSM are still affected disproportionately by the epidemic, recent trends suggest a shift in the HIV/AIDS epidemic towards women, American Indians, African Americans, and high-risk-heterosexuals. As the epidemic continues to change and the number of persons living with HIV continues to grow, it is important to identify those populations most at risk for and impacted by HIV infection to plan for HIV prevention and allocate resources effectively.

Figure 10. Trends in HIV/AIDS Cases by Race/Ethnicity
South Dakota, 1997-2006



White persons have accounted for the largest percentage of HIV/AIDS diagnoses every year but 2002. However, it should be noted that white persons (including Hispanic) make up 89% of the South Dakota population.

Figure 11. HIV/AIDS Diagnoses by Race
South Dakota, 2000-2006



Although American Indian and Black persons account for 9% and 1% of the South Dakota population, they make up 23% and 24% of the HIV/AIDS cases diagnosed since 2000.

Figure 12. Trends in HIV/AIDS Rates Among Men by Race
South Dakota, 1997-2006 (Cases per 100,000)

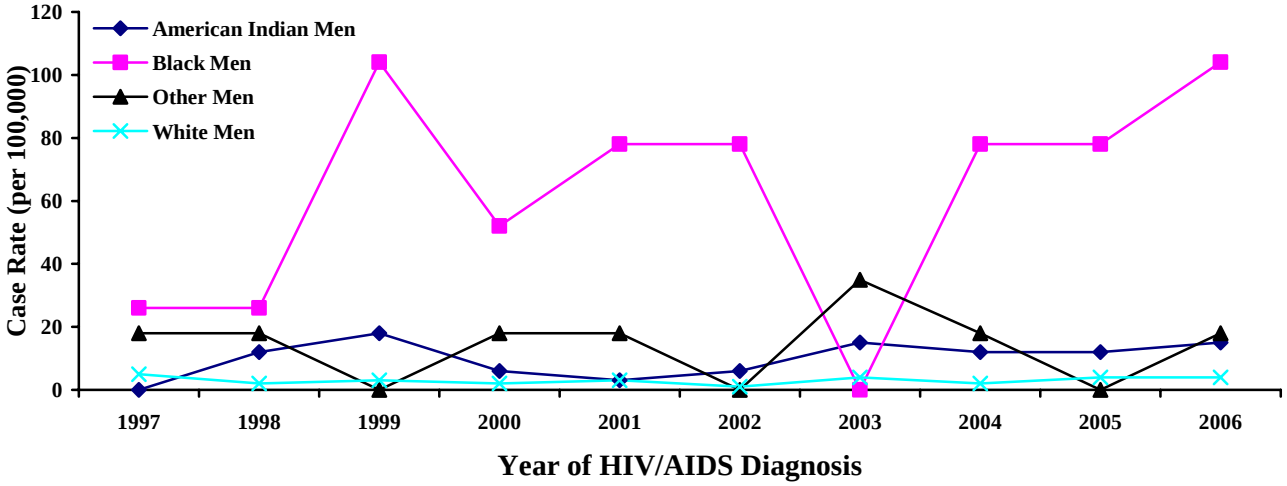
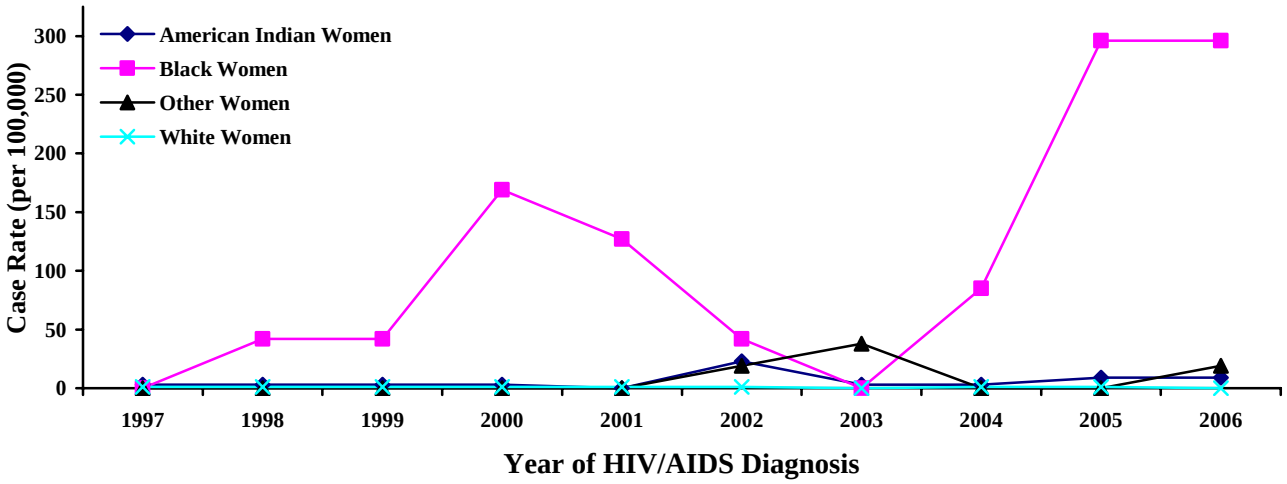


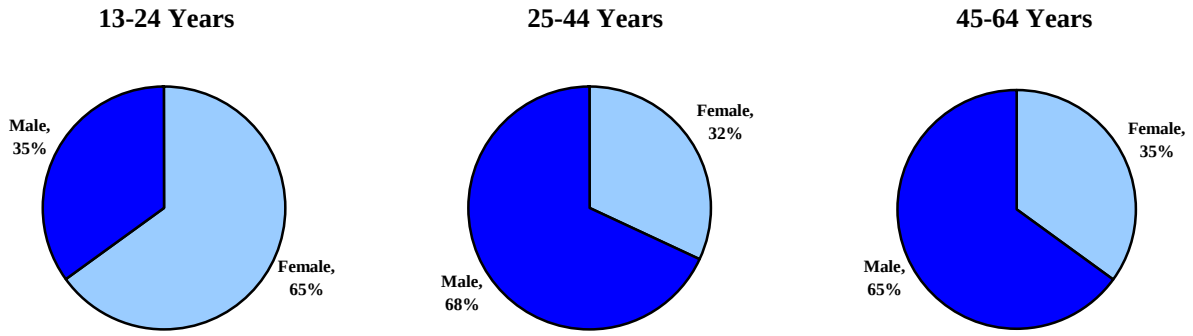
Figure 13. Trends in HIV/AIDS Rates Among Women by Race
South Dakota, 1997-2006 (Cases per 100,000)



The HIV/AIDS case rates for both men and women are highest among Black persons and lowest among White persons.

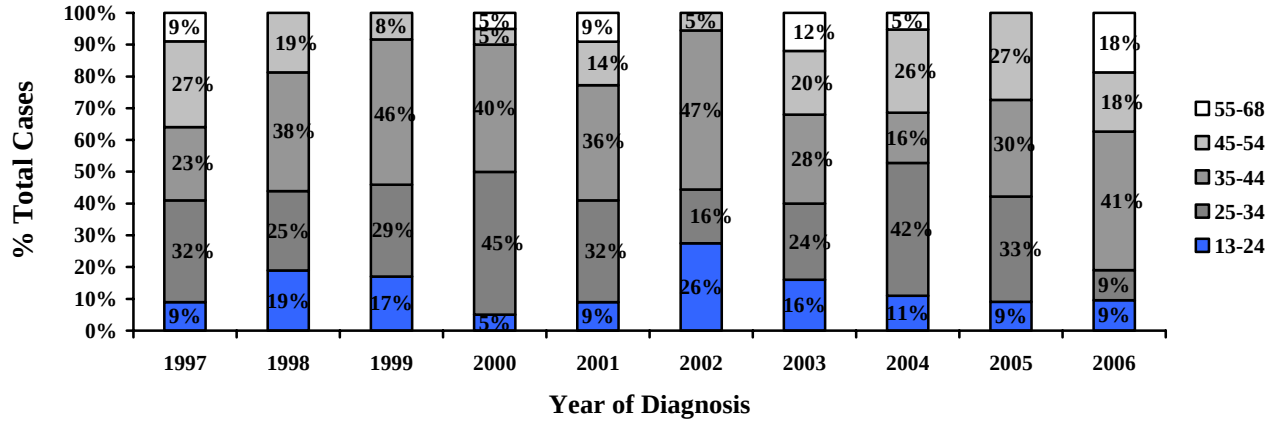
HIV/AIDS DIAGNOSIS BY AGE AND SEX

Figure 14. HIV/AIDS Cases by Age Group and Sex
South Dakota, 2000-2006



A much higher proportion of new cases since 2000 among the 13-24 year age group are female compared to older age groups, 25-44 years and 45-64 years.

Figure 15. Trends in HIV/AIDS Cases by Age Group
South Dakota, 1997-2006



In 2006, persons 35-44 years of age had the highest percentage of newly-diagnosed HIV/AIDS cases with 41%. Although the percentage of persons 25-34 diagnosed with HIV/AIDS dropped in 2002 and 2006, persons 25-34 and 35-44 attributed the highest percentage of new HIV/AIDS cases from 1997-2005.

Age at Diagnosis and Current Age of Persons Living with AIDS

Figure 16. Diagnosis Age for Persons Living with HIV/AIDS (n=325)

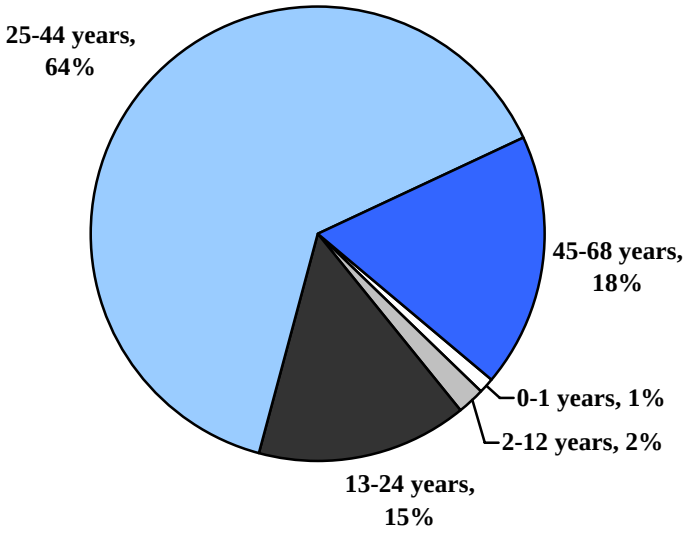
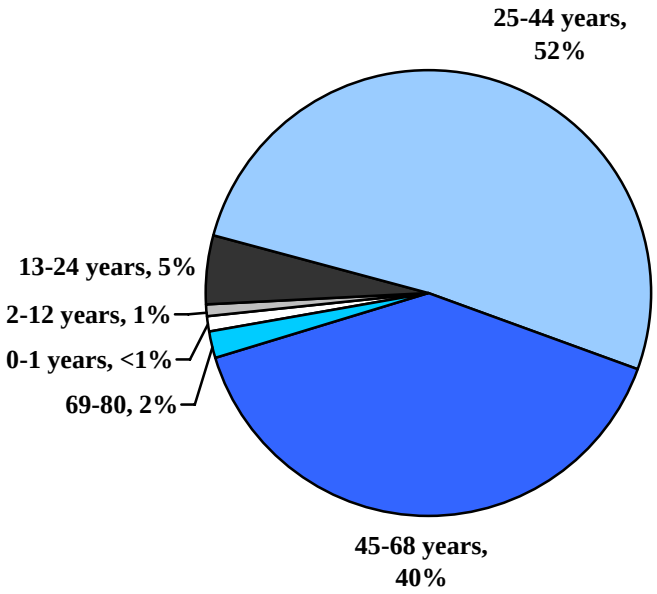


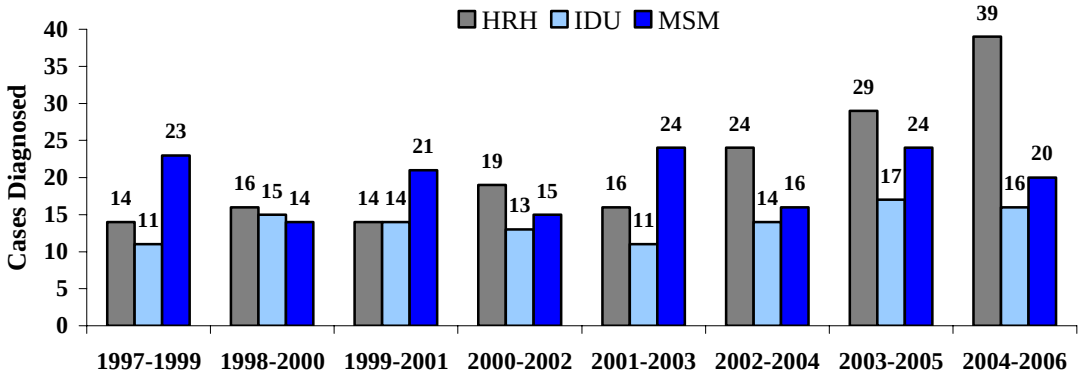
Figure 17. Current Age of Persons Living with HIV/AIDS (n=325)



HIV/AIDS CASES BY MODE OF EXPOSURE

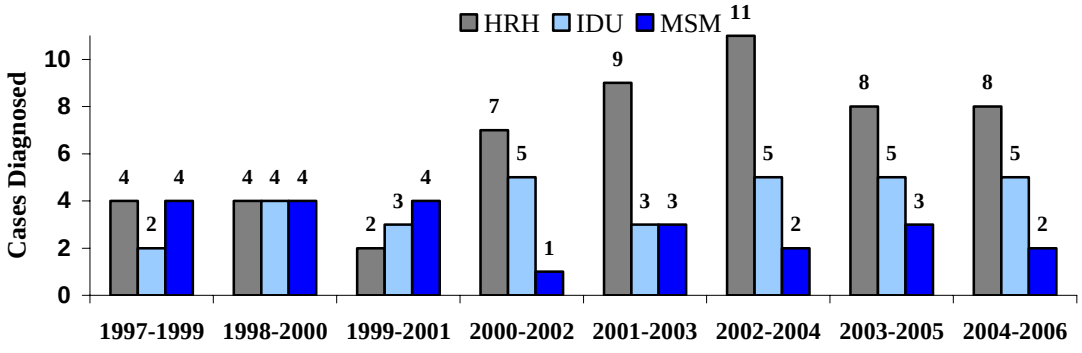
Throughout the epidemic, most HIV transmission has occurred among men who have sex with men (MSM); however, other exposure routes have become more common. The following figures show the trends in HIV exposure categories with respect to American Indian, Black, Hispanic/Other, and White persons, as well as sex.

Figure 18. Trends in Exposure Categories
South Dakota HIV/AIDS Cases, 1997-2006



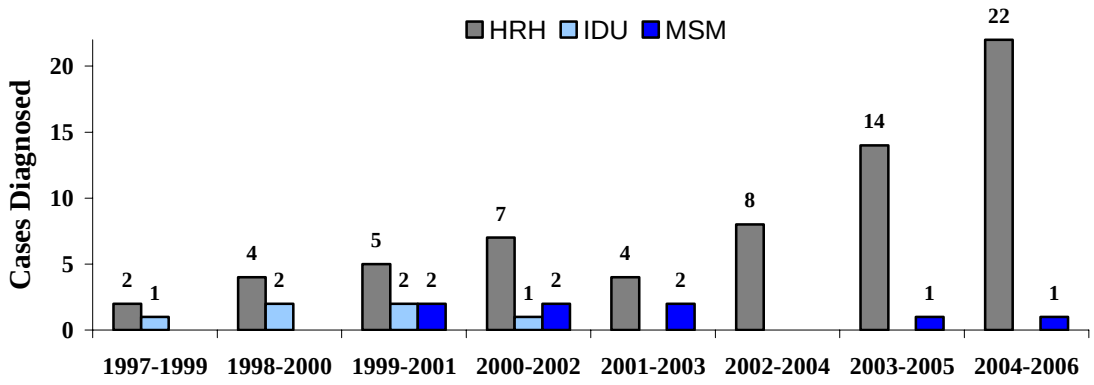
The predominant mode of exposure to HIV/AIDS in South Dakota since 1997 has been high risk heterosexual (HRH) contact. The number of high risk heterosexual cases has increased greatly, while the number of cases with injection drug use (IDU) listed as the risk exposure has increased slightly and exposure listed as men who have sex with men (MSM) has remained relatively constant. The largest proportion of HIV/AIDS cases detected in 2006 was attributed to high risk heterosexual contact (41%). However, it should be noted that 21% of the cases diagnosed in 2006 did not have a specified mode of exposure.

Figure 19. Trends in Exposure Categories Among American Indian Persons
South Dakota HIV/AIDS Cases, 1997-2006



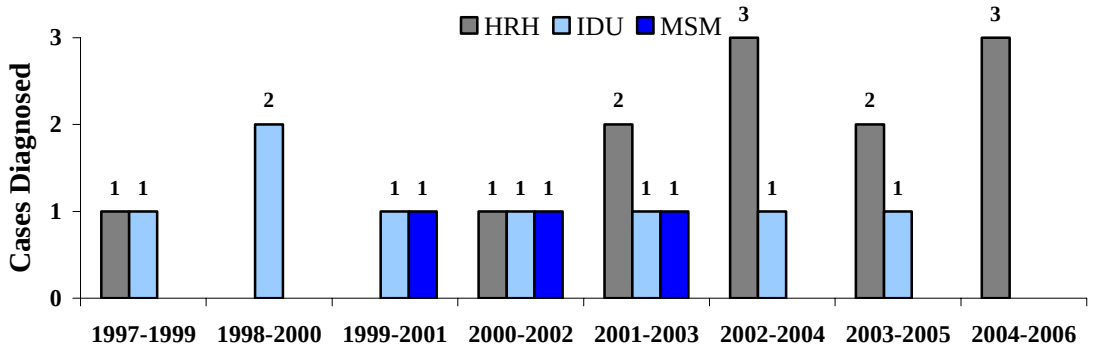
High risk heterosexual contact (HRH), which has increased since 1997, is the predominant risk exposure among American Indians. The number of cases with injection drug use (IDU) listed as the risk exposure has increased and men who have sex with men diagnosed with HIV/AIDS has decreased. In 2006, 50% of new cases were unspecified, 25% were high-risk heterosexual, and men who have sex with men and injection drug users accounted for 13% each.

Figure 20. Trends in Exposure Categories Among Black Persons
South Dakota HIV/AIDS Cases, 1997-2006



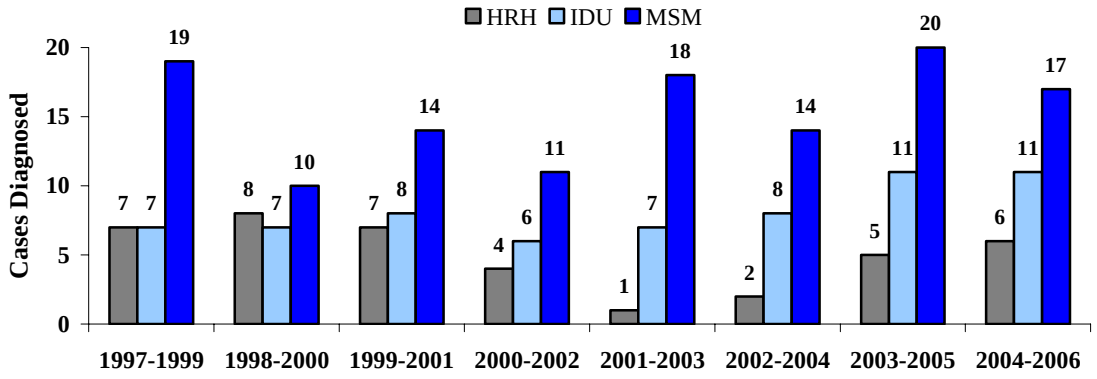
Among Black persons, high-risk heterosexual contact is the leading exposure category, accounting for 73% of the new HIV/AIDS cases in 2006. Perinatal/Pediatric cases accounted for 18% of the new cases in 2006 and unspecified exposure accounted for 9% or new cases in 2006. High risk heterosexual contact cases have increased in number since 1997 among black persons, and injection drug use (IDU) and men who have sex with men (MSM) have had occasional occurrence.

Figure 21. Trends in Exposure Categories Among Hispanic/Other Persons
South Dakota HIV/AIDS Cases, 1997-2006



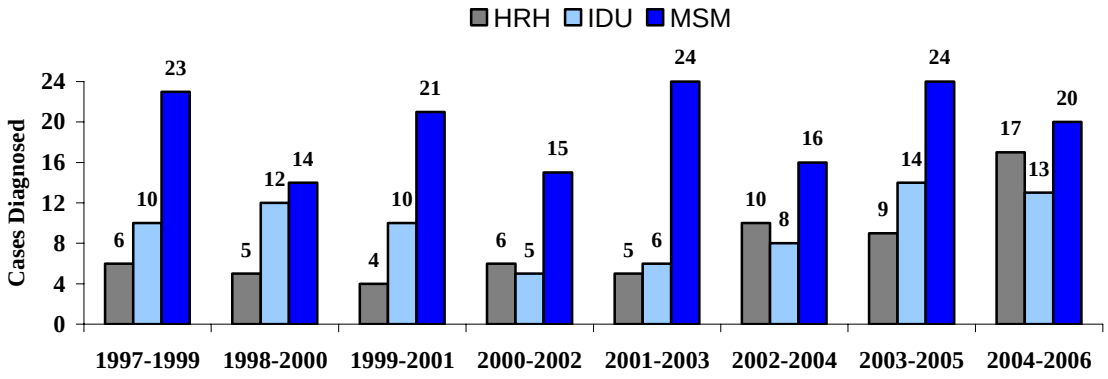
People of Hispanic origin or a race other than White, Black or American Indian have had high-risk heterosexual contact listed as the exposure category most often, with injection drug use (IDU) and men who have sex with men occasionally occurring. High-risk heterosexual contact accounted for 100% of the new Hispanic/other cases in 2006.

Figure 22. Trends in Exposure Categories Among White Persons
South Dakota HIV/AIDS Cases, 1997-2006



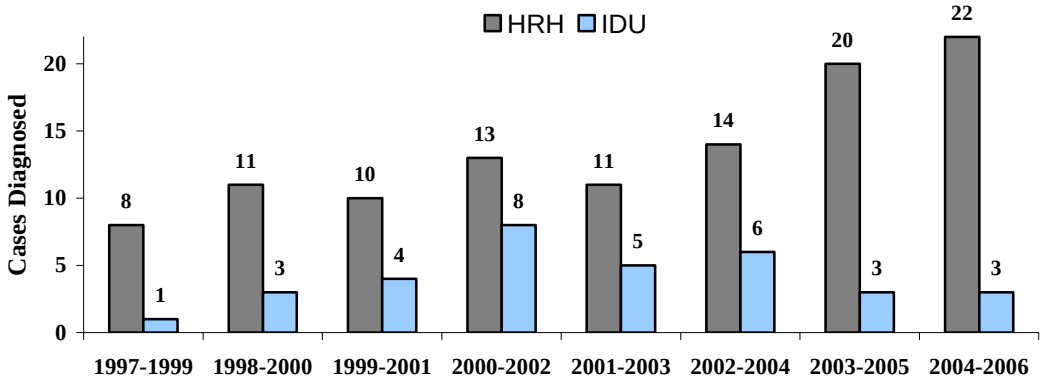
The predominant exposure among White persons is men who have sex with men (MSM). MSM and high risk heterosexual (HRH) cases have decreased slightly since 1997, and injection drug use (IDU) cases have remained relatively constant. In 2006, 54% of the new cases among whites were men who have sex with men, 15% were high-risk heterosexuals, 15% were injection-drug users, and 15% were unspecified.

Figure 23. Trends in Exposure Categories Among Men
South Dakota HIV/AIDS Cases, 1997-2006



The exposure trends in men have remained relatively stable over time, with men who have sex with men having the greatest risk. However, high-risk heterosexual contact cases rose substantially in 2006. In 2006, 41% of newly diagnosed male cases were high-risk heterosexual, followed by 36% men who have sex with men, 14% injection drug users, and 6% unspecified exposure.

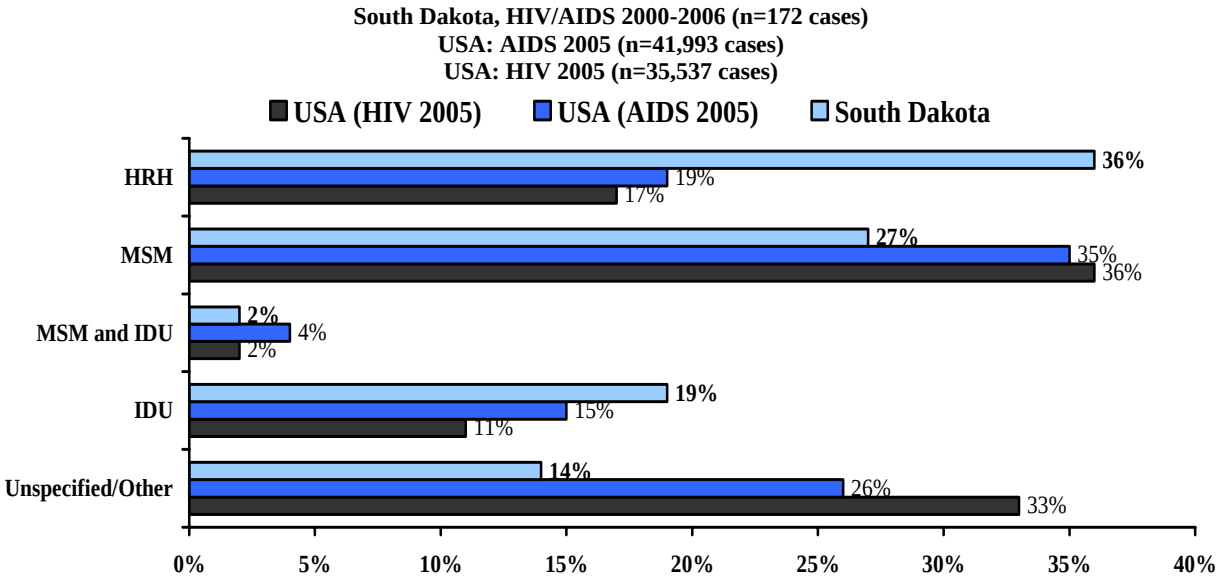
Figure 24. Trends in Exposure Categories Among Women
South Dakota HIV/AIDS Cases, 1997-2006



The predominant risk category among women continues to be HRH exposure and IDU is the second most common exposure. In 2006, unspecified exposure and HRH categories accounted for 42% each, while 17% of newly diagnosed cases were perinatal or pediatric.

NATIONAL HIV/AIDS EXPOSURE TRENDS[10]

Figure 25. Exposure Category Comparison-South Dakota and USA



According to South Dakota HARS data and the 2005 CDC HIV/AIDS Surveillance Report, South Dakota has approximately double the percentage of HIV/AIDS cases with high-risk heterosexual contact listed as the risk exposure than the national HIV and AIDS percentages in 2005. South Dakota is also above the national HIV and AIDS percentage of cases with intravenous drug use listed as a risk exposure[10]. However, South Dakota MSM percentages of HIV/AIDS cases are lower than the national HIV and AIDS MSM percentages.

FOREIGN BORN HIV/AIDS TRENDS

The number of foreign born HIV/AIDS cases has been increasing in South Dakota. Foreign born persons account for 9% of the cumulative HIV/AIDS cases diagnosed in South Dakota, 14% of the living HIV/AIDS cases, and 22% of the HIV/AIDS cases diagnosed since 2000.

Figure 26. US and Foreign Born HIV/AIDS Cases
South Dakota, 2000-2006

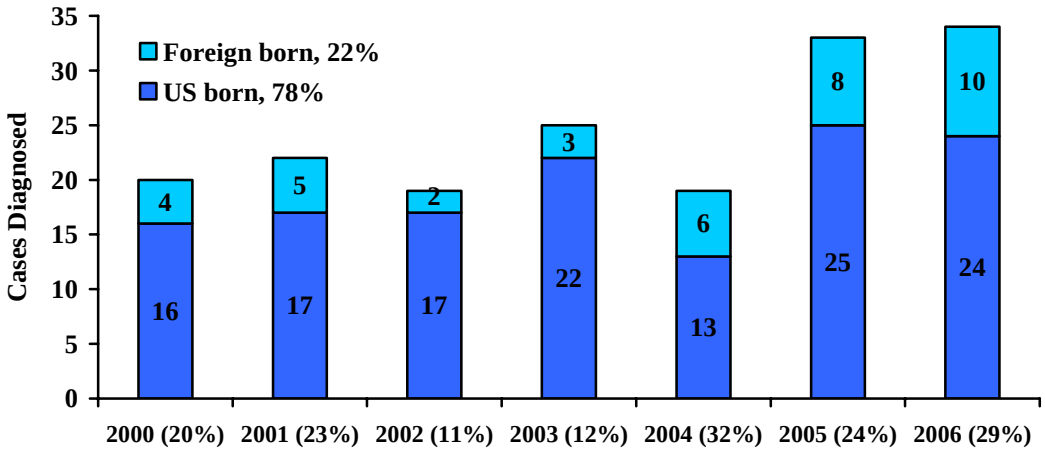
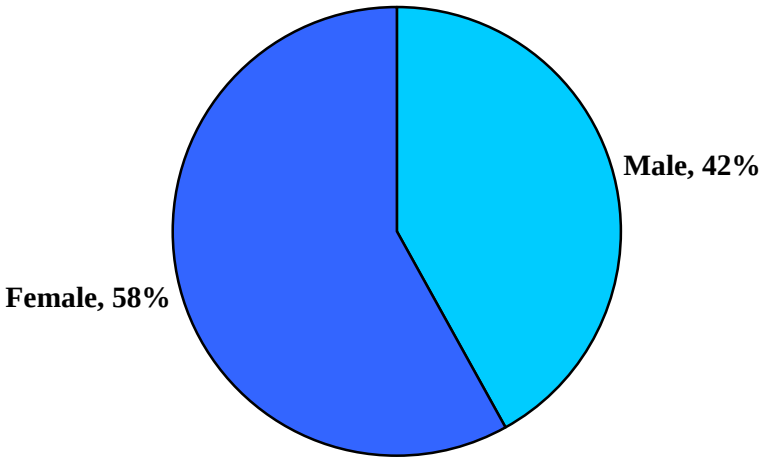
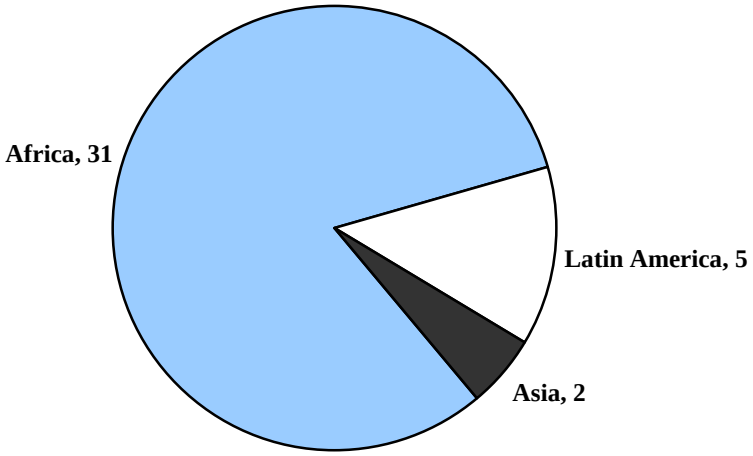


Figure 27. Sex of Foreign Born HIV/AIDS Cases
South Dakota, 2000-2006



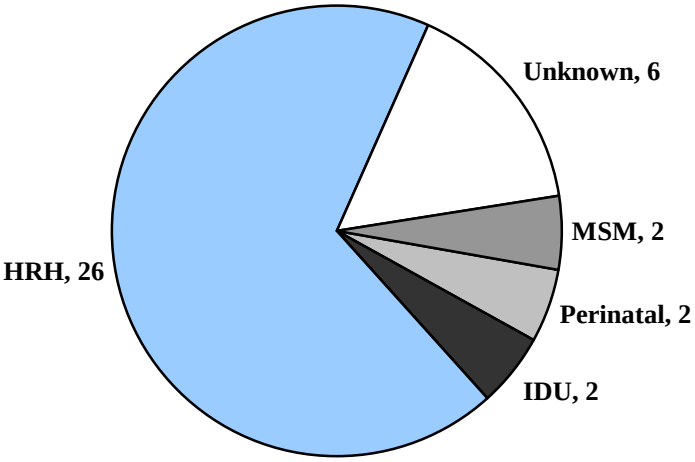
Between 2000 and 2006, females accounted for 58% of the foreign born cases diagnosed and males accounted for 42%. The median age of the foreign born cases is 30 years (range 0-59).

Figure 28. Origin of Foreign Born HIV/AIDS Cases (n=38)
South Dakota, 2000-2006



Of the 38 foreign born HIV/AIDS cases diagnosed between 2000 and 2006, 31 were African, 5 were Latin American, and 2 were Asian.

Figure 29. Exposure Category of Foreign Born HIV/AIDS Cases
South Dakota, 2000-2006



Among foreign born persons, high-risk heterosexual contact is the predominant mode of exposure to HIV/AIDS. Between 2000 and 2006, 26 of 38 (68%) newly diagnosed HIV/AIDS cases were reported as high-risk heterosexual. Men who have sex with men, perinatal/pediatric and intravenous drug use accounted for 2 cases each between 2000 and 2006. Unknown exposure accounted for six of the new cases.

AIDS Trends in South Dakota

This section describes the cumulative and recent trends or persons diagnosed with AIDS in South Dakota, persons living with HIV/AIDS, and deaths of persons with AIDS as of December 31, 2006.

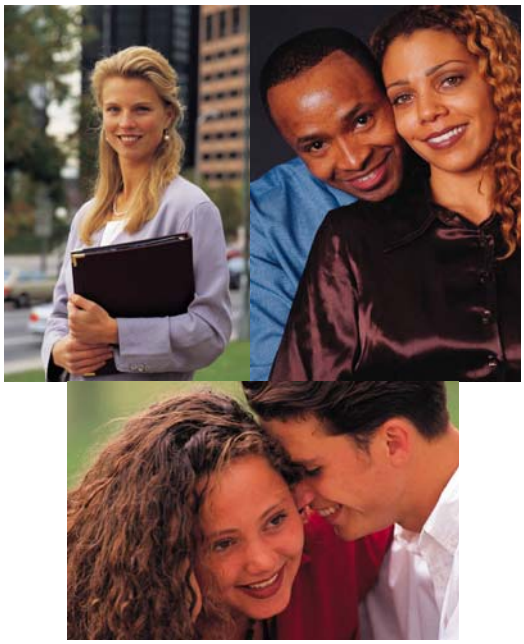
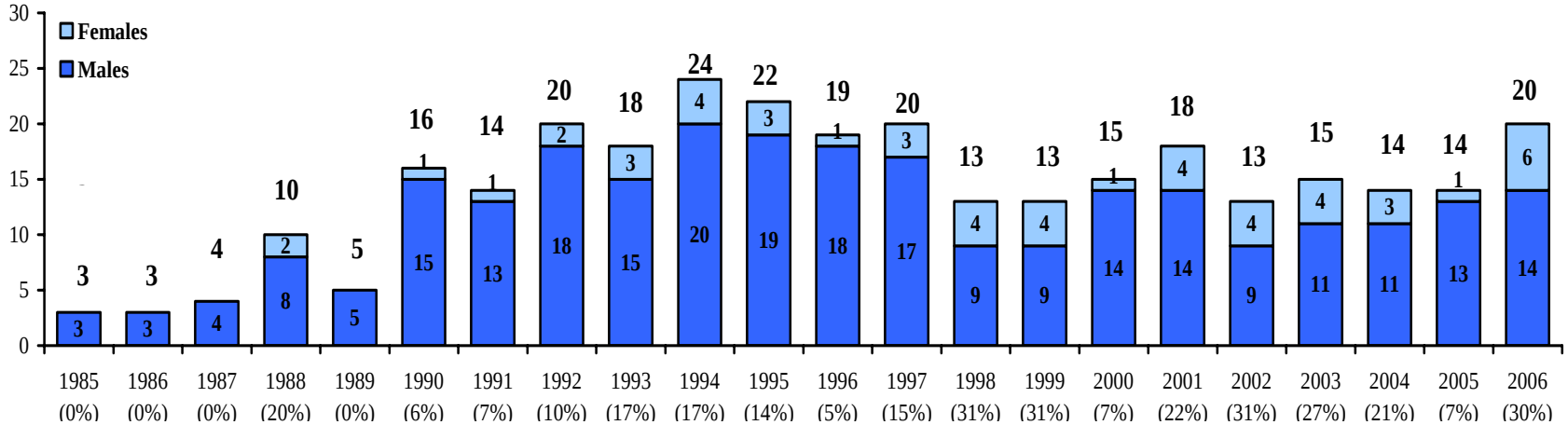


Table 9. Characteristics of South Dakota AIDS Cases as of December 31, 2006

	Diagnoses between 2000-2006 *Minimum estimate of persons diagnosed with AIDS*		Total AIDS Diagnoses *Cumulative number of persons diagnosed with AIDS (1985-2006)*		Persons Living with AIDS *Minimum estimate of persons living with AIDS (2006)*	
	Cases	**Percent[a]**	**Cases**	**Percent**	**Cases**	**Percent**
TOTAL	109	100%	313	100%	134	100%
Sex						
Male	86	79%	262	84%	108	81%
Female	23	21%	51	16%	26	19%
Ethnicity						
American Indian	22	20%	49	16%	20	15%
Black	23	21%	29	9%	23	17%
Hispanic and Other[b]	3	3%	10	3%	5	4%
White	61	56%	225	72%	86	64%
Country of Origin						
United States	92	84%	292	93%	116	87%
Other	17	16%	21	7%	18	13%
Age Group	(Age at AIDS Diagnosis)		(Age at AIDS Diagnosis)		(Age at AIDS Diagnosis)	
< 2 years	1	1%	4	1%	2	1%
2-12 years	8	7%	20	6%	12	9%
13-24 years	0	0%	1	0%	0	0%
25-44 years	67	61%	220	70%	90	67%
45-68 years	33	30%	68	22%	30	22%
Exposure Category						
Heterosexual	22	20%	45	14%	27	20%
IDU[c]	24	22%	46	15%	21	16%
MSM[d]	39	36%	152	49%	56	42%
MSM & IDU	7	6%	18	6%	5	4%
Perinatal/Pediatric	4	4%	9	3%	5	4%
Transfusion/Hemophilia	1	1%	15	5%	6	4%
Unspecified	12	11%	28	9%	14	10%
HIV Planning Region						
American Indian	4	4%	15	5%	6	4%
Black Hills	22	20%	77	25%	42	31%
Central	5	5%	16	5%	7	5%
Northeast	10	9%	26	8%	12	9%
Southeast	54	50%	122	39%	67	50%
Unknown/Other[e]	14	13%	57	18%	0	0%
Facility of Diagnosis						
Private	63	58%	199	64%	85	63%
Public	34	31%	65	21%	41	31%
Unknown	12	11%	49	16%	8	6%

a. Due to rounding, percentages may not add up to 100%.
b. Hispanic and Other denotes cases that are Asian, Hispanic, or Multi-race.
c. IDU denotes injection drug use.
d. MSM denotes men who have sex with men.
e. Unknown/Other denotes cases in which the AIDS county is unknown or in a state other than South Dakota.

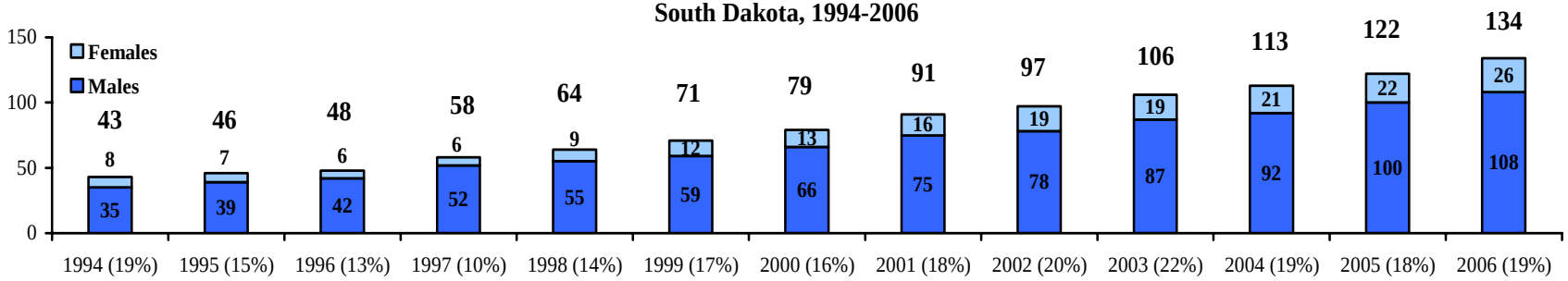
Figure 30. AIDS Cases by Sex and Year of Diagnosis
South Dakota, 1985-2006



Year (% Female Cases)

In 2006, 20 new AIDS cases were diagnosed in South Dakota. The number of AIDS cases diagnosed each year has been declining since 1994. The percentage of new female AIDS cases diagnosed has increased steadily since 1985. Please note that the case definition of reportable AIDS cases was expanded in 1993. In South Dakota, and nationally, the number of cases reported increased due to this revision. The number of cases reported in the years following 1993 might also be higher than it would have been under the previous case definition. The increase reflects the reporting of persons with HIV-related conditions diagnosed before that date that were not eligible for reporting until their conditions were added to the AIDS surveillance case definition.

Figure 31. Males and Females Living with AIDS
South Dakota, 1994-2006



Year (% Female Cases)

The number of persons living with AIDS has continued to increase over the years. At the end of 2006, 134 persons were known to be living with AIDS in South Dakota. The percentage of living cases that are female has increased steadily since 1997.

AIDS Diagnosis Year by Planning Region, 1985-2006

(See page 29 for maps of AIDS diagnosis by County since 1985.)

Figure 32. AIDS Diagnosis by Year in American Indian Region (n=15)

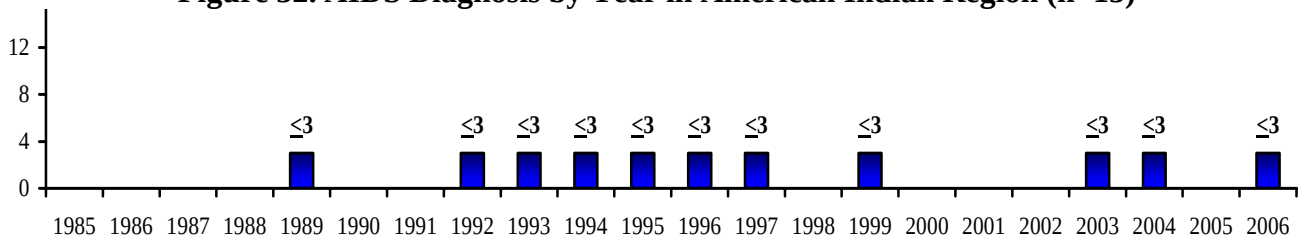


Figure 33. AIDS Diagnosis by Year in Black Hills Region (n=77)

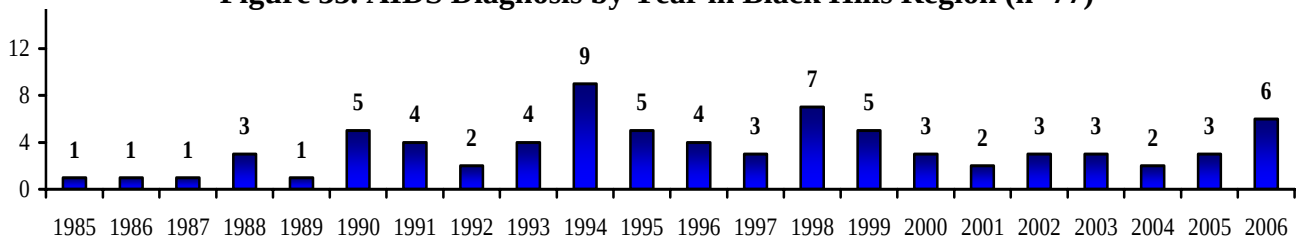


Figure 34. AIDS Diagnosis by Year in Central Region (n=16)

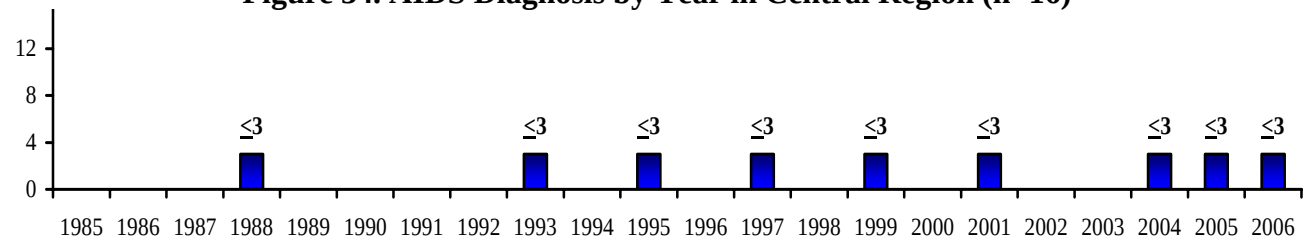


Figure 35. AIDS Diagnosis by Year in Northeast Region (n=26)

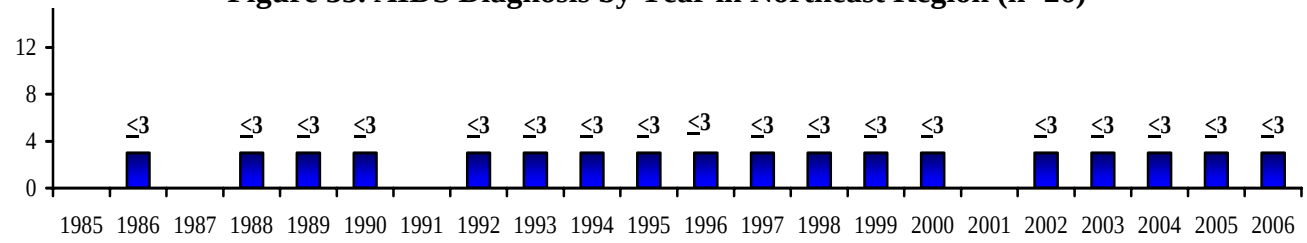
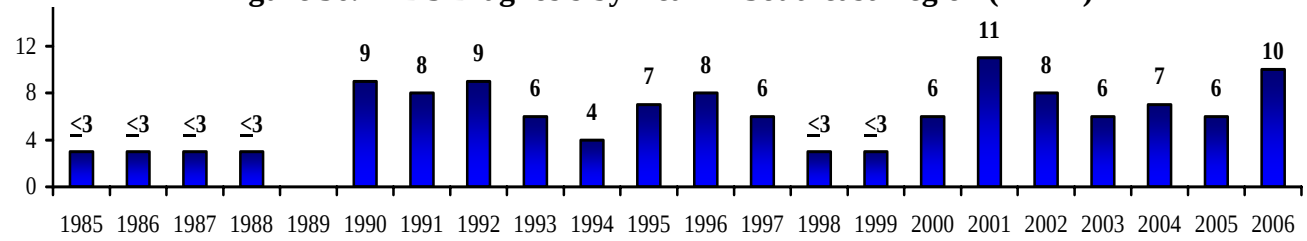
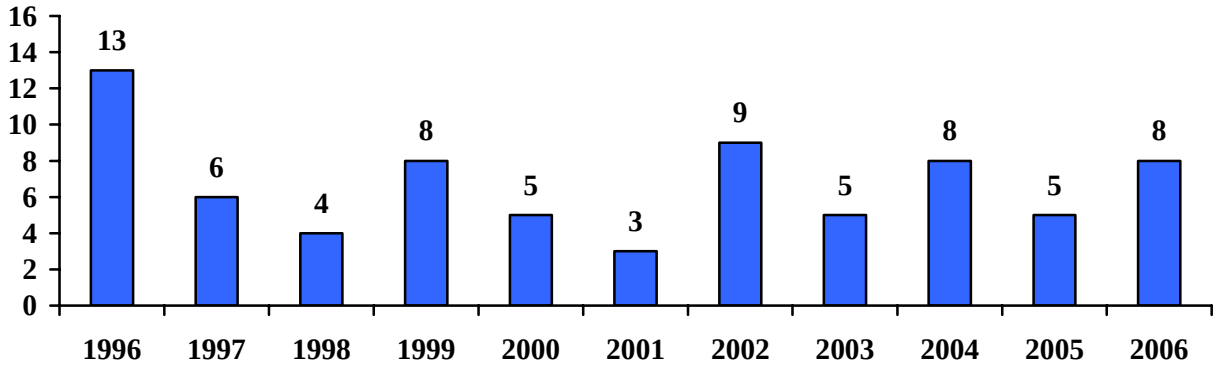


Figure 36. AIDS Diagnosis by Year in Southeast Region (n=122)



AIDS Related Mortality

Figure 37. Deaths of Persons Diagnosed with AIDS
South Dakota, 1996-2006

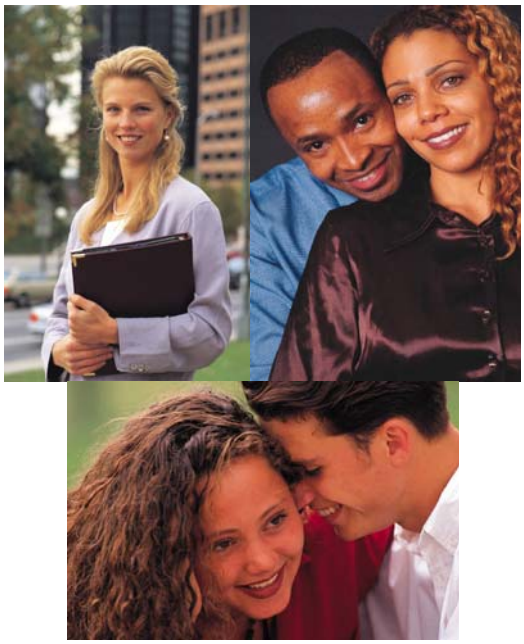


The number of reported AIDS deaths has decreased since 1996. A combination of earlier detection and effective drug therapies are responsible for this trend. Since 1996, 74 AIDS deaths have been reported. White persons accounted for the greatest number of deaths with 52 (70%), followed by American Indian with 16 (22%), Black with 5 (7%), and Hispanic/Other with 1 (1%).

*Data related to deaths includes all deaths reported to the Department of Health by February 5, 2007.

Geographic Distribution of HIV/AIDS in South Dakota

This section displays the geographic distribution by South Dakota County of living and diagnosed HIV/AIDS and AIDS cases as of December 31, 2006 and national HIV and AIDS rates.



HIV/AIDS AND AIDS DISTRIBUTION BY COUNTY

Forty-five of South Dakota's 66 counties have reported at least 1 individual with HIV/AIDS. Forty South Dakota counties have reported an individual with AIDS. Because confidentiality must be protected, counties with less than 5 reported cases are not specifically enumerated, but rather shown as ≤5 in Figures 38-41.

Pennington and Minnehaha Counties

The 2 most populous counties in South Dakota have been disproportionately affected by the HIV/AIDS epidemic. While only one-third of the state's residents live in Minnehaha and Pennington Counties, 62% of the people with HIV/AIDS in South Dakota reside in these counties. HIV/AIDS cases in Pennington County account for 77% of the cases in the Black Hills planning region, and 77% of persons with HIV/AIDS in the Southeast planning region reside in Minnehaha County. Better access to medical care may have drawn people with HIV to these counties.

Table 10. HIV/AIDS and AIDS Cases Diagnosed in Minnehaha and Pennington Counties as of December 31, 2006

	Population	% State Population	HIV/AIDS Cases	% Total Cases	AIDS cases	% Total Cases
Minnehaha and Pennington County	253,667	33%	326	62%	147	47%
Other 64 SD Counties	522,266	67%	194	37%	109	35%
Unknown/Other*	NA	NA	9	2%	57	18%
TOTAL	**775,933**	**100%**	**529**	**101%**	**313**	**100%**
Minnehaha County	160,087	21%	204	39%	93	30%
Pennington County	93,580	12%	122	23%	54	17%
Other 64 SD Counties	522,266	67%	194	37%	109	35%
Unknown/Other*	NA	NA	9	2%	57	18%
TOTAL	**775,933**	**100%**	**529**	**101%**	**313**	**100%**

DISTRIBUTION OF LIVING HIV & AIDS CASES BY COUNTY

Currently, there are persons living with HIV or AIDS in 36 of South Dakota's 66 counties. Most of the living HIV/AIDS or AIDS cases are in Minnehaha or Pennington Counties - 66% of the HIV/AIDS cases and 63% of the AIDS cases.

Table 11. Living HIV & AIDS Cases in Minnehaha and Pennington Counties as of December 31, 2006

	Population	% State Pop.	HIV & AIDS Cases	% Total Cases	Rate per 100,000	AIDS cases	% Total Cases	Rate per 100,000
Minnehaha and Pennington County	253,667	33%	216	66%	85.2	84	63%	33.1
Other 64 SD Counties	522,266	67%	109	34%	20.9	50	37%	9.6
TOTAL	**775,933**	**100%**	**325**	**100%**	**41.9**	**134**	**100%**	**17.3**
Minnehaha County	160,087	21%	142	44%	88.7	55	41%	34.4
Pennington County	93,580	12%	74	23%	79.1	29	22%	31.0
Other 64 SD Counties	522,266	67%	109	34%	20.9	50	37%	9.6
TOTAL	**775,933**	**100%**	**325**	**101%**	**41.9**	**134**	**100%**	**17.3**

Figure 38. South Dakota HIV/AIDS Cumulative Case Distribution as of December 31, 2006

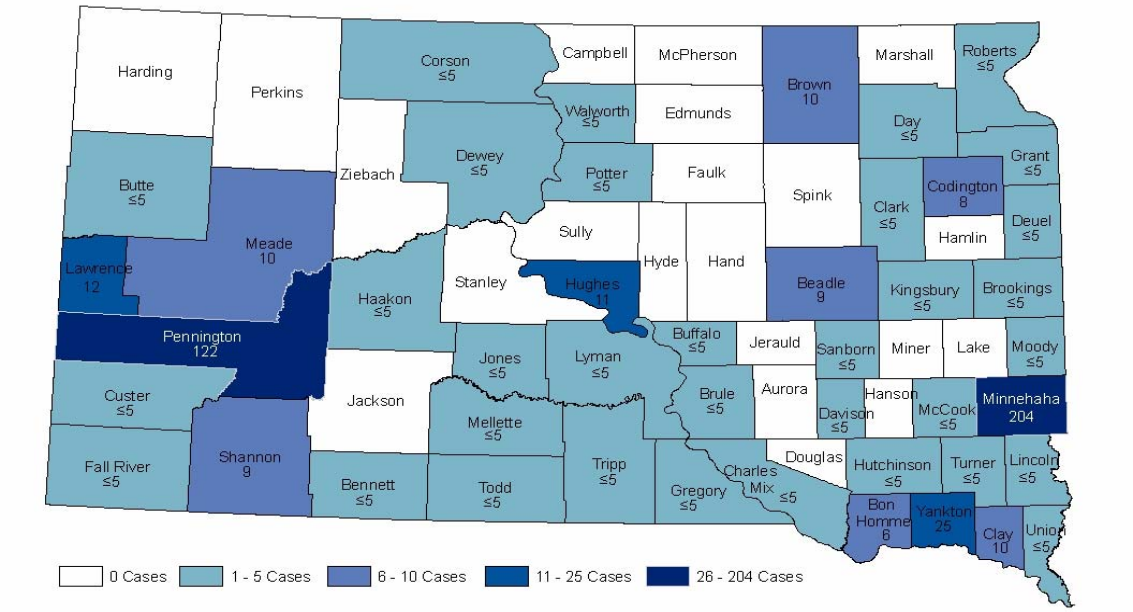


Figure 39. South Dakota AIDS Cumulative Case Distribution as of December 31, 2006

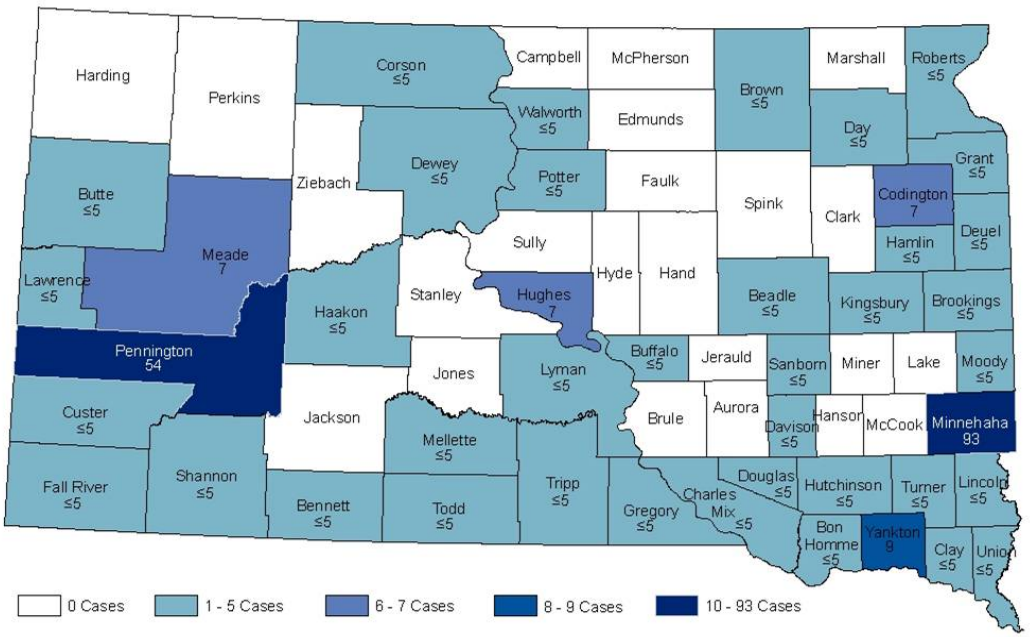


Figure 40. Distribution of Living South Dakota HIV and AIDS Cases as of December 31, 2006

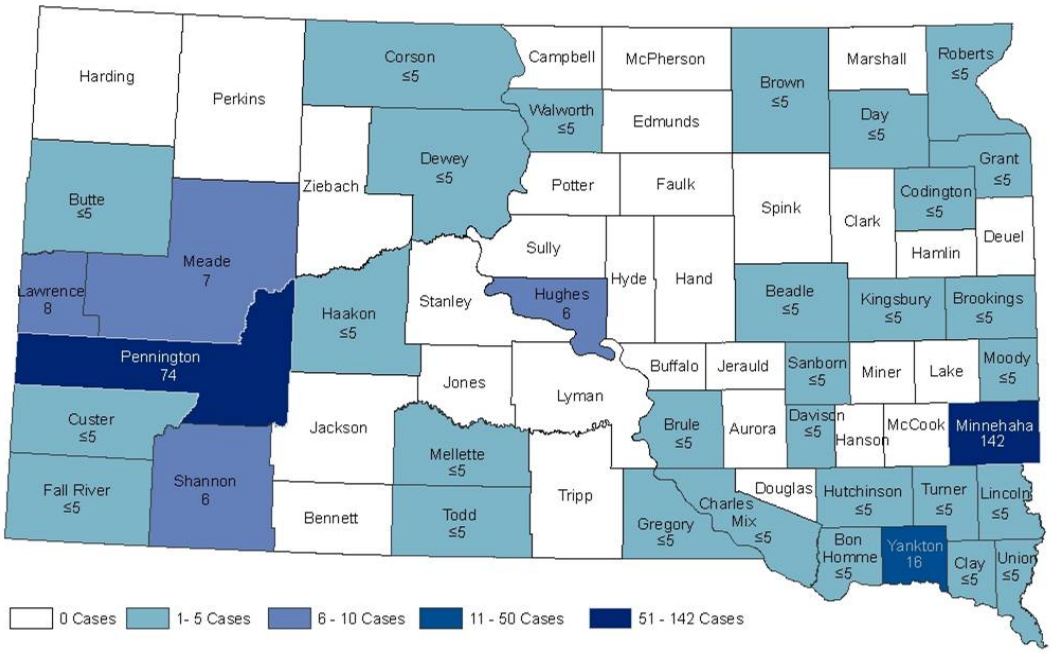
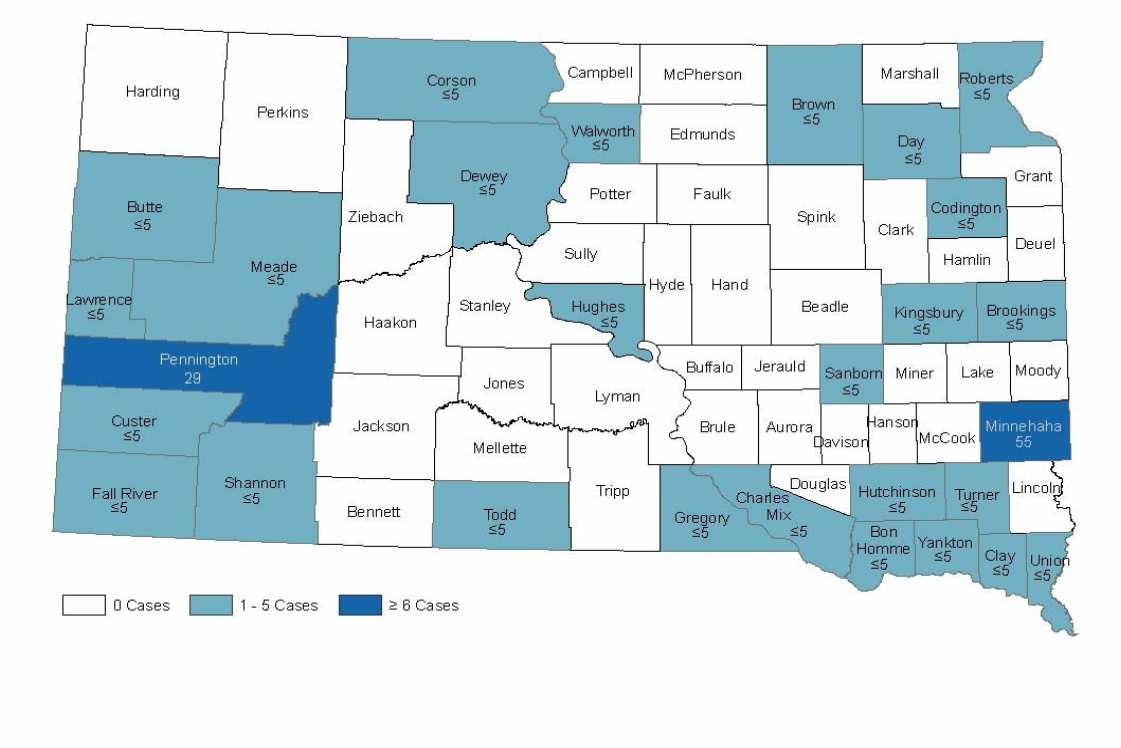


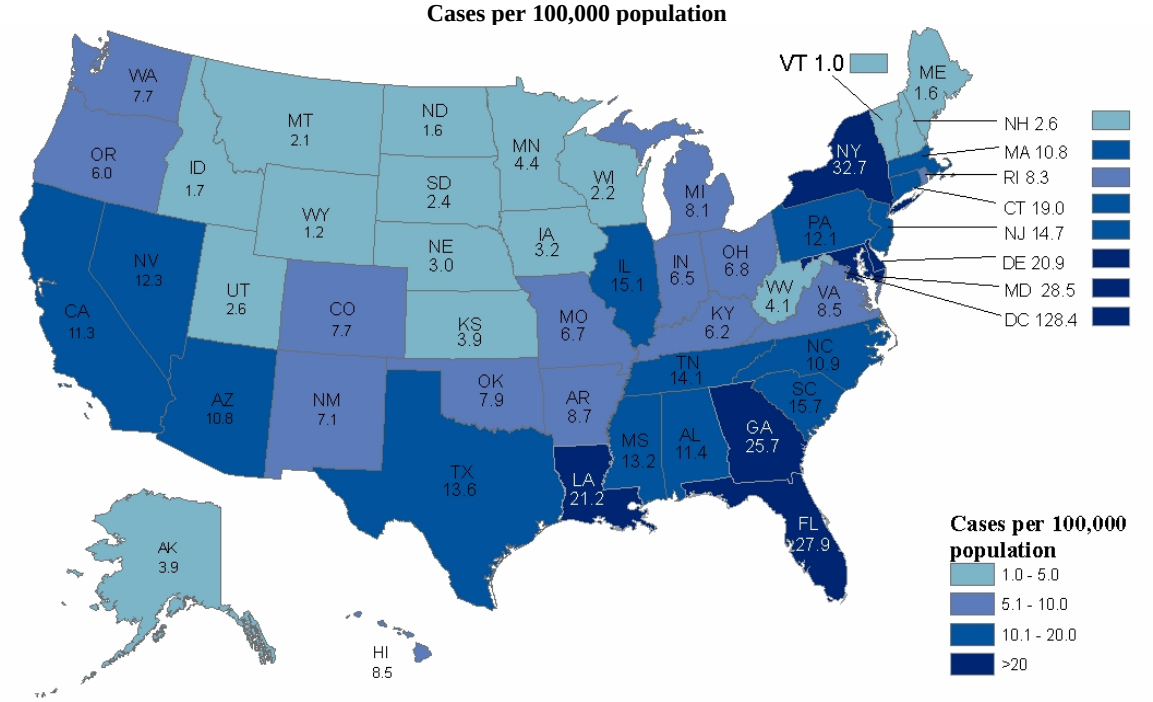
Figure 41. Distribution of Living South Dakota AIDS Cases as of December 31, 2006



NATIONAL HIV AND AIDS TRENDS

Figure 42. 2005 National Newly Reported AIDS Rates [10]

Cases per 100,000 population



South Dakota ranked 8th lowest in AIDS case rates and 4th lowest in number of new AIDS cases reported in the United States in 2005, according to the most recent CDC HIV/AIDS Surveillance Report[10]. South Dakota ranked 2nd lowest among states in 2005 for persons living with AIDS. Recent national HIV rates were not available in the 2005 CDC HIV/AIDS Surveillance Report.

Table 12. AIDS Cases Reported by State, 2005 [10]

State	Cases	State	Cases	State	Cases	State	Cases	State	Cases
Vermont	6	Utah	65	Minnesota	225	Alabama	518	Louisiana	961
Wyoming	6	West Virginia	74	Arkansas	242	Arizona	642	New Jersey	1278
North Dakota	10	Rhode Island	89	Kentucky	257	Virginia	646	Pennsylvania	1510
South Dakota	**19**	Iowa	95	Oklahoma	282	Connecticut	666	Maryland	1595
Montana	20	Kansas	107	Nevada	296	South Carolina	668	Illinois	1922
Maine	21	Hawaii	109	Colorado	359	Massachusetts	692	Georgia	2333
Idaho	25	Wisconsin	123	Missouri	386	Ohio	784	Texas	3113
Alaska	26	New Mexico	136	Mississippi	387	Michigan	822	California	4088
New Hampshire	34	Delaware	176	Indiana	409	Tennessee	841	Florida	4960
Nebraska	53	Oregon	220	Washington	486	North Carolina	945	New York	6299

Highly-active antiretroviral therapies (HAART), which have been effective in the treatment of HIV infection, have altered the natural history of HIV disease. These new therapies have delayed the progression from HIV to AIDS and from AIDS to death for many people infected with HIV. Due to the widespread use of these new treatments, South Dakota, as well as the rest of the nation, has seen declines in both the number of new AIDS cases diagnosed and AIDS-related deaths. For this reason, AIDS surveillance data no longer accurately represents trends in HIV transmission. Rather, AIDS surveillance data now reflect differences in access to testing and treatment and the potential failure of certain treatment regimens. Consequently, AIDS incidence and deaths provide a measure for identifying and describing the populations for whom testing and treatment may have not been accessible or effective.

Figure 43. 2005 National Rates for Persons Living with HIV (not AIDS) [10]

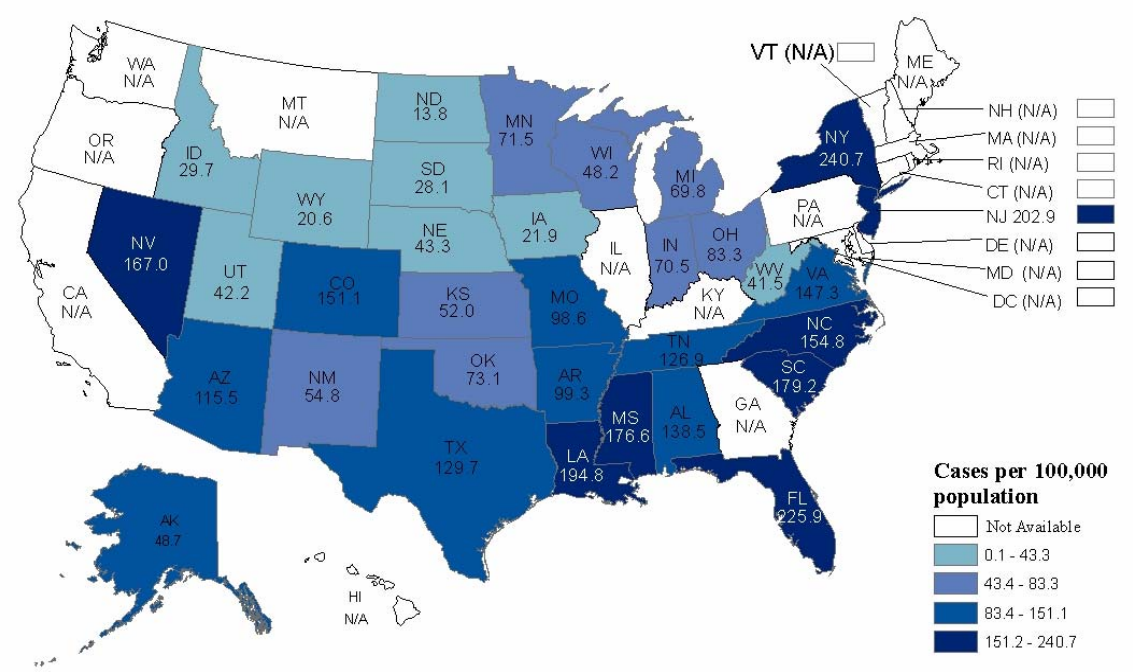
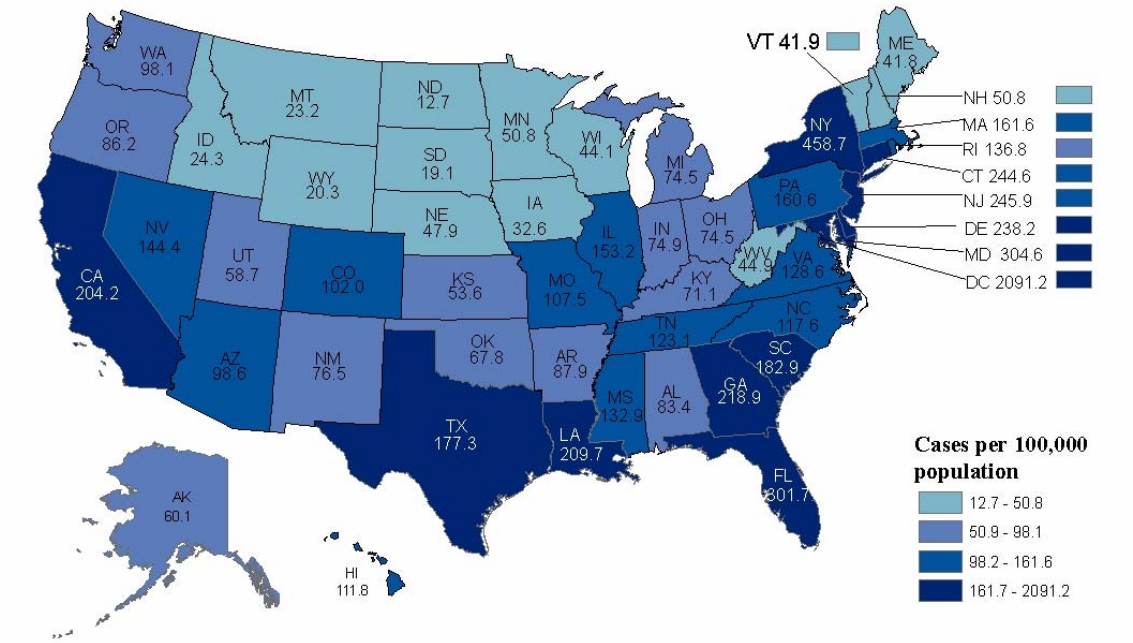
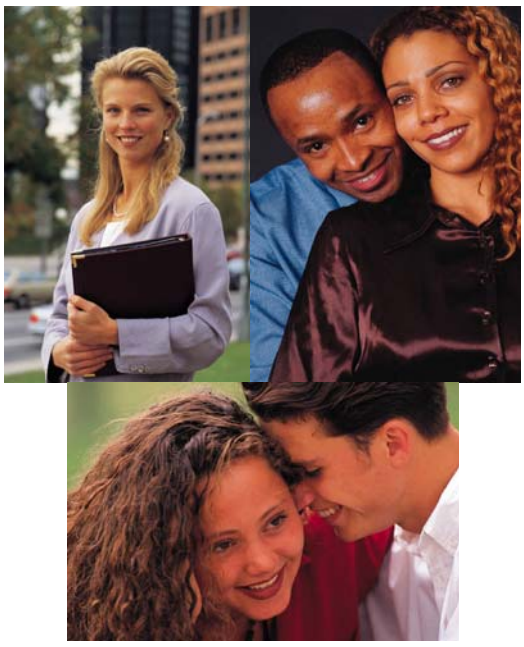


Figure 44. 2005 National Rates for Persons Living with AIDS [10]



Other Sexually Transmitted Diseases in South Dakota

This section describes the cumulative and recent Chlamydia, Gonorrhea, Genital Herpes, and Infectious Syphilis trends in South Dakota as of December 31, 2006.



OTHER SEXUALLY TRANSMITTED DISEASES IN SOUTH DAKOTA

Chlamydia, gonorrhea, and syphilis are the most common bacterial sexually transmitted diseases (STDs). Persons with bacterial STDs represent a group of sexually active persons who have recently had unprotected intercourse with other persons who have STDs. Ulcerative STDs can facilitate transmission or acquisition of HIV. The extent to which STD rates are associated with HIV risk depends on the prevalence of HIV infection in the population.

In 2006, 2,633 Chlamydia cases were reported in South Dakota. This was a decrease from the 2,701 cases of Chlamydia reported in 2005, the highest since reporting started. The number of gonorrhea cases reported increased to 367 in 2006. The number of infectious syphilis (primary, secondary, and early latent) cases reported in 2006, 19, was the highest since 1983.

Figure 45. South Dakota Chlamydia Cases, 1988-2006

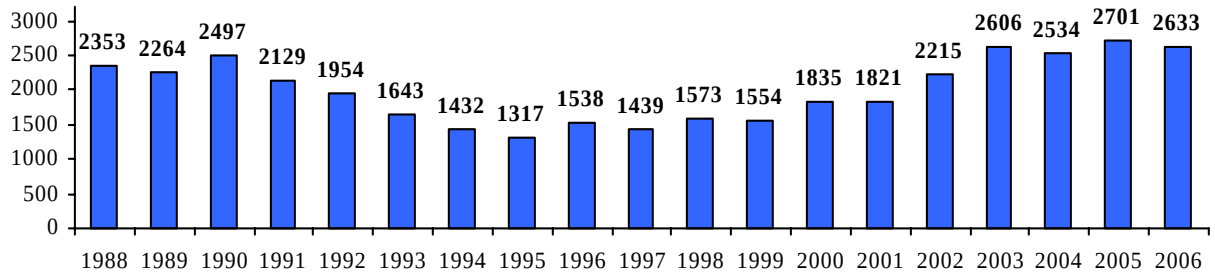


Figure 46. South Dakota Gonorrhea Cases, 1988-2006

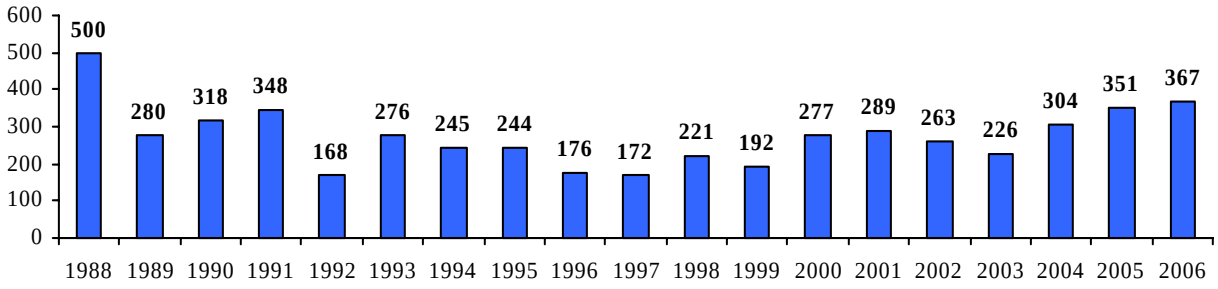
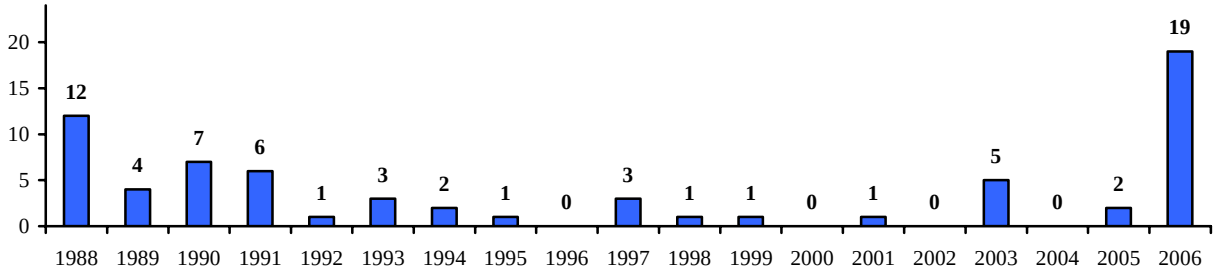


Figure 47. South Dakota Infectious Syphilis Cases, 1988-2006

Infectious Syphilis includes primary, secondary, and early latent cases (less than one year duration).



CHLAMYDIA AND GONORRHEA DISTRIBUTION BY SOUTH DAKOTA COUNTY

Figure 48. South Dakota Chlamydia Rates by County, 2000-2006
(Average Annual Incidence per 100,000 persons)

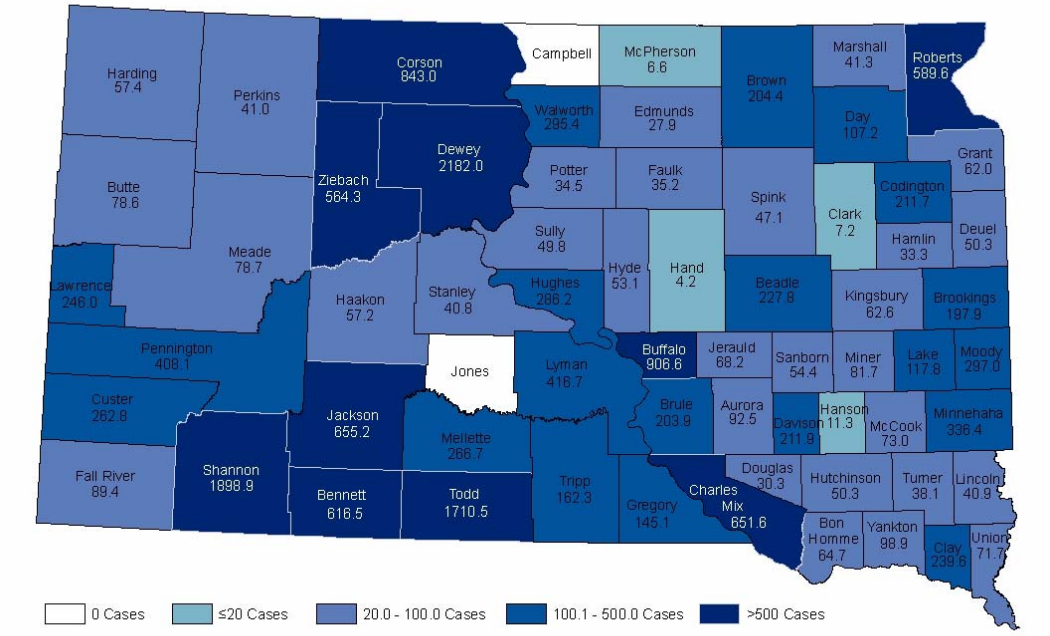
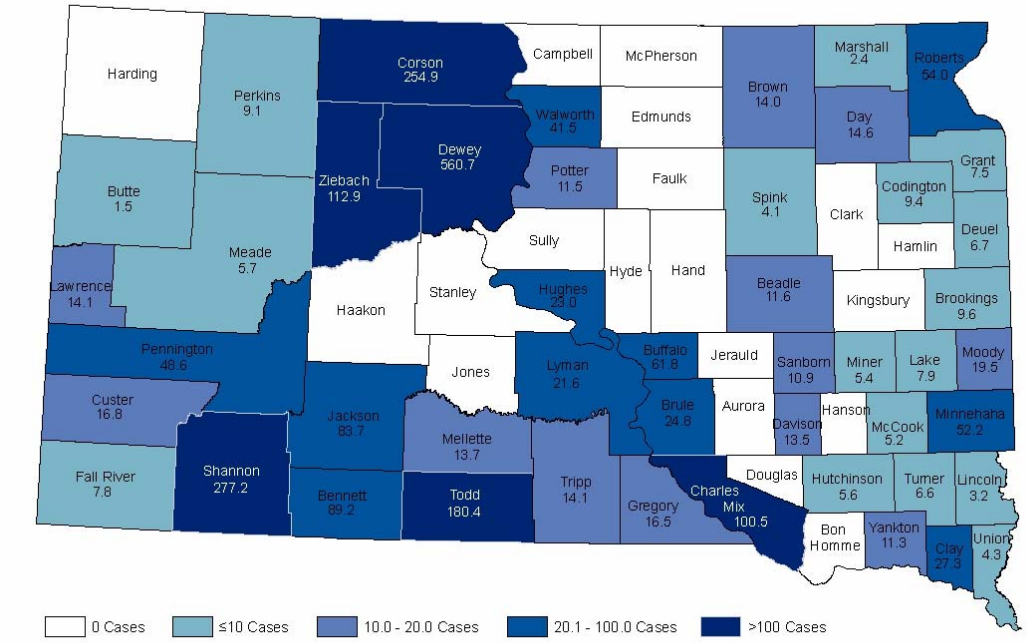


Figure 49. South Dakota Gonorrhea Rates by County, 2000-2006
(Average Annual Incidence per 100,000 persons)



The average annual incidence rates were calculated using the 2004 county population estimates.

SEXUALLY TRANSMITTED DISEASES IN SOUTH DAKOTA BY AGE, SEX, AND RACE

Table 13. Chlamydia, Gonorrhea, Genital Herpes, and Infectious Syphilis Rates
South Dakota, 2000-2006 (Average Annual Incidence)

	Chlamydia (n=16,344)			**Gonorrhea** (n=2,077)			**Herpes** (n=2,326)			**Syphilis** (n=27)		
	Female	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**
Total	441.9	174.3	309.3	45.1	33.4	39.3	72.7	14.5	44.0	0.3	0.8	0.5

Average annual incidence rates (per 100,000 population) are based on 2000 census population estimates.
Infectious syphilis includes primary, secondary and early latent cases (less than one year duration).

Table 14. Chlamydia, Gonorrhea, Genital Herpes, and Infectious Syphilis Rates by Age and Sex
South Dakota, 2000-2006 (Average Annual Incidence)

	Chlamydia (n=16,205)			**Gonorrhea** (n=2,055)			**Herpes** (n=2,293)			**Syphilis** (n=27)		
Age at Diagnosis	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**
0-4 years	6.3	2.2	4.2	0.0	1.1	0.6	1.7	7.7	5.0	0.0	0.0	0.0
5-9 years	2.7	0.5	1.6	0.0	0.5	0.3	3.8	0.0	1.8	0.0	0.0	0.0
10-14 years	110.5	8.9	58.4	9.4	0.9	5.0	4.4	0.9	2.6	0.0	0.0	0.0
15-19 years	2281.1	521.2	1374.8	214.1	80.4	145.2	164.1	8.9	84.6	0.0	0.0	0.0
20-24 years	2403.6	1000.1	1684.5	236.2	160.8	197.8	306.2	49.0	175.6	0.0	1.6	0.8
25-29 years	919.6	506.0	708.8	97.1	113.0	105.2	196.1	44.7	119.5	0.6	2.5	1.6
30-34 years	305.1	204.0	254.1	48.3	55.4	51.9	113.2	26.8	70.0	0.0	1.8	0.9
35-39 years	101.5	78.3	90.1	18.8	21.6	20.2	73.1	19.6	46.2	0.0	2.5	1.3
40-44 years	45.1	34.7	40.1	6.9	12.5	9.7	56.8	13.0	34.7	2.5	0.0	1.2
45-54 years	18.5	11.2	14.8	3.3	7.2	5.3	43.6	9.7	26.3	0.3	1.1	0.7
55-64 years	5.0	3.3	4.1	0.5	2.8	1.6	28.8	6.5	17.9	0.0	0.5	0.2
≥65 years	1.1	1.3	1.2	0.2	0.6	0.4	8.0	5.3	6.9	0.0	0.0	0.0

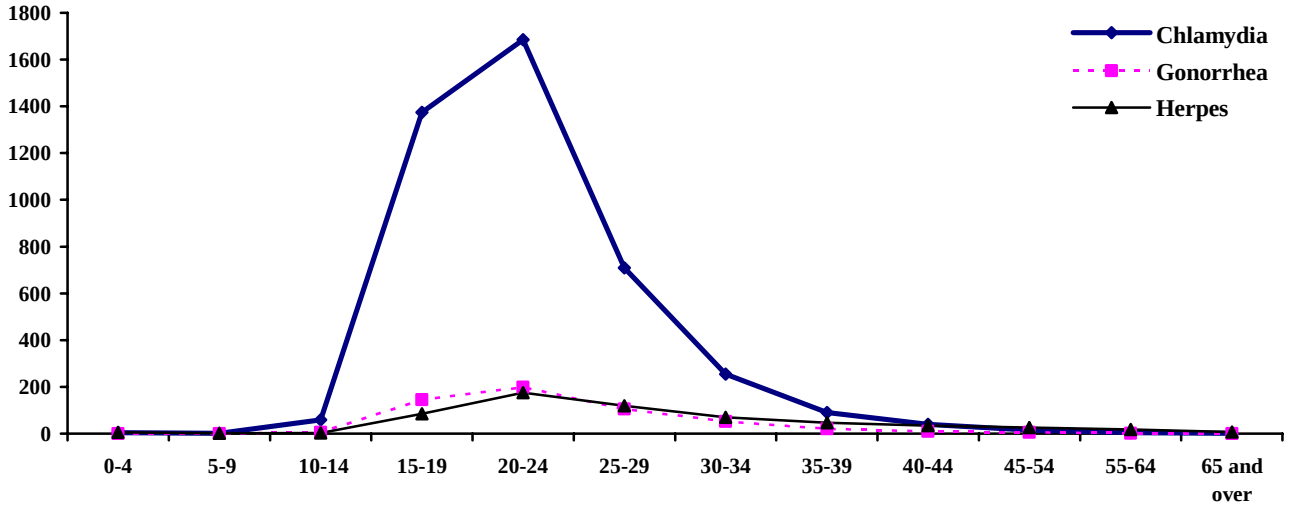
Average annual incidence rates (per 100,000 population) are based on 2000 census population estimates.
Average annual incidence rates may be underestimated because cases with unknown ages were not included in the totals.
Infectious syphilis includes primary, secondary and early latent cases (less than one year duration).

Table 15. Chlamydia, Gonorrhea, Genital Herpes, and Infectious Syphilis Rates by Race and Sex
South Dakota, 2000-2006 (Average Annual Incidence)

	Chlamydia (n=16,282)			**Gonorrhea** (n=2,068)			**Herpes** (n=2,228)			**Syphilis** (n=27)		
Race/Ethnicity	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**
American Indian	2362.9	795.9	1598.8	313.3	185.6	252.1	64.0	13.6	39.5	2.5	2.5	2.5
Black	895.2	1441.5	1232.5	194.1	614.0	456.6	31.3	15.3	21.3	0.0	3.8	2.4
Hispanic/Other	421.3	411.9	403.8	40.2	119.5	79.5	26.8	22.9	24.0	0.0	2.5	1.3
White	240.9	91.8	167.2	16.6	9.6	13.1	71.5	13.6	42.9	0.0	0.5	0.3

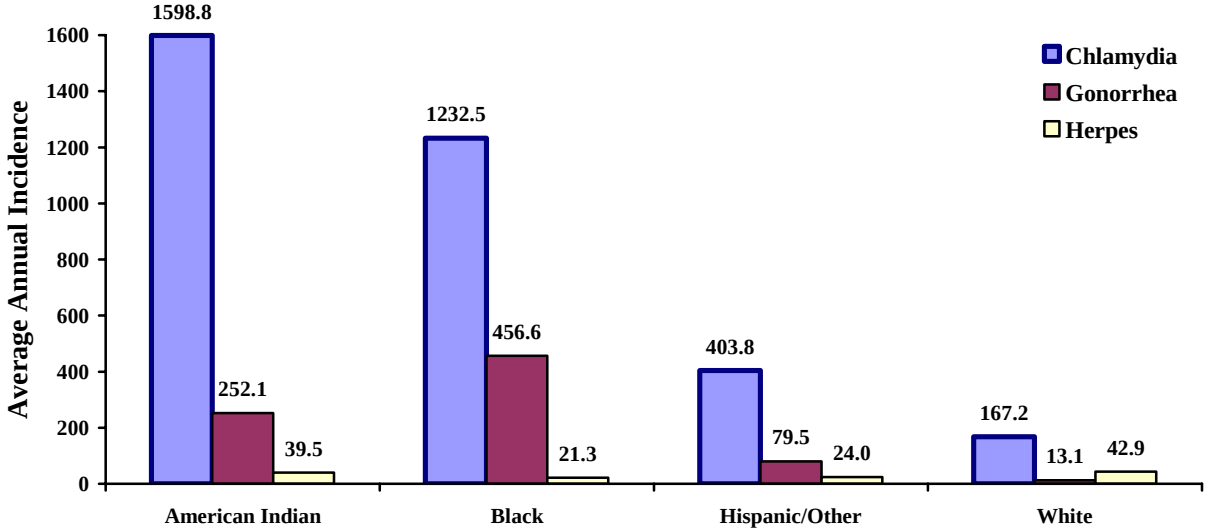
Average annual incidence rates (per 100,000 population) are based on 2000 census population estimates.
Average annual incidence rates may be underestimated because cases with unknown races were not included in the totals.
Infectious syphilis includes primary, secondary and early latent cases (less than one year duration).

Figure 50. Chlamydia, Gonorrhea, and Genital Herpes Rates by Age
South Dakota, 2000-2006 (Average Annual Incidence)



Chlamydia, gonorrhea, and herpes rates all peak in the 20-24 year old age group. Syphilis rates are greatest in the 25-29 age group. It should be noted that national Chlamydia and gonorrhea trends for women show a peak in the 15-19 year old age group, whereas South Dakota women peak in the 20-24 year old age group.

Figure 51. Chlamydia, Gonorrhea, and Genital Herpes Rates by Race
South Dakota, 2000-2006 (Average Annual Incidence)

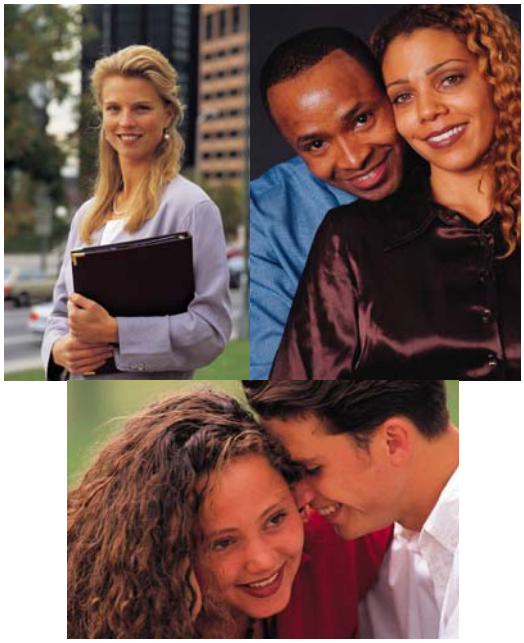


Chlamydia rates are highest among American Indians, followed by Black, Hispanic/Other, and White persons. Gonorrhea rates are highest among Black persons, followed by American Indians, Hispanic/Other, and White persons. Herpes rates are highest among White persons, followed by American Indians, Hispanic/Other, and Black persons. Syphilis rates are highest among American Indians, followed by Black, Hispanic/Other, and White persons.

When compared to the national rates in 2005, South Dakota was ranked 20th highest for Chlamydia rates, 38th for gonorrhea rates, and 44th for primary and secondary syphilis rates[12].

HIV Testing in South Dakota

This section describes HIV testing and delays in testing in South Dakota by sex, age, and race.



HIV COUNSELING AND TESTING DATA

There are six Department of Health (DOH) counseling and confidential testing sites around the state. The DOH sites are located in Sioux Falls, Watertown, Aberdeen, Dupree, Rapid City and Pierre (Appendix 1). Much of the HIV testing in South Dakota is conducted through non-DOH testing sites.

In 2006, 960 HIV tests were performed by DOH staff; one of which was positive. The demographics of the individuals tested are displayed in the following table:

Table 16. HIV Tests Performed by Department of Health in 2006

	Persons Tested	Percent[a]
TOTAL	960	100%
Sex		
Female	462	48%
Male	498	52%
Age		
<5 years	0	0%
5-12 years	0	0%
13-19 years	238	25%
20-29 years	430	45%
30-39 years	133	14%
40-49 years	111	12%
>50 years	48	5%
Race		
American Indian	173	18%
Black	81	8%
Hispanic and Other	42	4%
White	661	69%
Unknown	3	<1%

a. Due to rounding, percentages may not add up to 100%
b. Hispanic and Other refers to individuals who are Asian, Hispanic, or Multi-race.

.

DELAYS IN TESTING

Since improved antiretroviral medications and preventative therapies are now available for HIV-infected persons, it is important that people are tested for HIV and referred into care early so that they can benefit from these advances. However, many people do not undergo testing until they are immunosuppressed or sick. Changes in public policies, media events or news stories, outreach campaigns, or perceived changes in stigma attached to HIV/AIDS may influence an individual's decision to get tested. Although time of infection is generally not known, the length of time between HIV diagnosis and AIDS diagnosis can be used to give a general idea of how far along in the course of the disease a person is when the first HIV diagnosis is made. A short period of time between HIV diagnosis and AIDS diagnosis suggests that a person may have been infected for some length of time. People with early HIV diagnoses (i.e., soon after infection) generally have longer time spans between HIV diagnosis and AIDS diagnosis. People who get into treatment quickly, respond well to therapy, and/or are adherent to treatment regimens would also have a longer time from HIV diagnosis to AIDS diagnosis.

The following tables show the percentage of people with HIV who were diagnosed in a given year and who received an AIDS diagnosis within one year from the time of their initial HIV diagnosis. A high percentage suggests that many people are being diagnosed with HIV late in the course of their infection (i.e., within one year of diagnosis); a low percentage suggests that they were diagnosed early in the course of infection or that they received treatment and did not progress to AIDS within that year.

Table 17. Percentage of Persons Diagnosed with AIDS within One Year of HIV Diagnosis, South Dakota, 1996-2005

HIV Diagnosis Year	Female	Male	Total Persons Diagnosed with HIV and AIDS within 1 year	Total Cases Diagnosed that Year	% Persons Diagnosed with HIV and AIDS within 1 Year
1996	1	7	8	21	38%
1997	0	8	8	22	36%
1998	0	3	3	16	19%
1999	1	5	6	24	25%
2000	1	4	5	20	25%
2001	2	5	7	22	32%
2002	2	2	4	19	21%
2003	0	7	7	25	28%
2004	3	6	9	19	47%
2005	1	7	8	33	24%
Total 1996-2005	**11**	**54**	**65**	**221**	**29%**

Of persons diagnosed with HIV/AIDS between 1996 and 2005, 29% were diagnosed with AIDS within one calendar year of HIV diagnosis. Of 34 foreign born persons diagnosed within this same time period, 13 (38%) were diagnosed with AIDS within one calendar year of HIV diagnosis, while 52 of 187 (27%) US born persons were diagnosed with AIDS within one calendar year of HIV diagnosis.

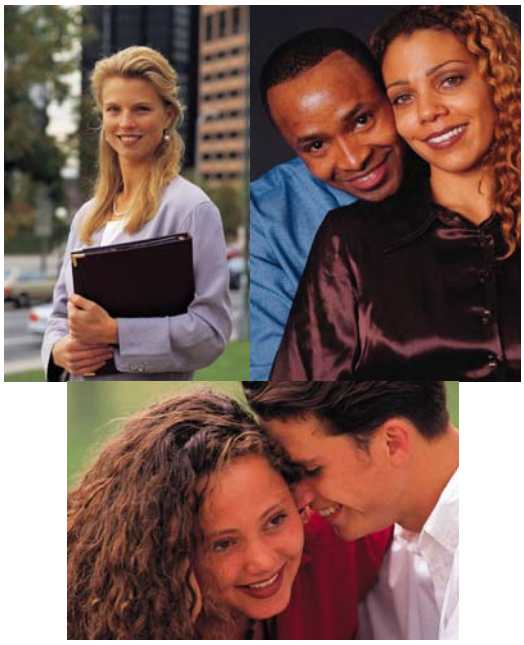
Table 18. Percentage of Persons Diagnosed with AIDS within One Year of HIV Diagnosis by Race, South Dakota, 1996-2005

Year of HIV Diagnosis	American Indian	Black	Hispanic and Other	White	Total Cases Diagnosed with HIV and AIDS that year
1996	1	1	0	6	8
1997	0	0	0	8	8
1998	2	0	0	1	3
1999	1	2	0	3	6
2000	0	3	0	2	5
2001	0	2	1	4	7
2002	2	0	0	2	4
2003	3	0	0	4	7
2004	1	3	1	4	9
2005	1	3	0	4	8
Total	**11**	**14**	**2**	**38**	**65**
% Race Group diagnosed with AIDS within 1 year of HIV diagnosis	23%	35%	20%	31%	
% All Cases Diagnosed with AIDS within 1 year of HIV diagnosis	**17%**	**22%**	**3%**	**58%**	**100%**

Although American Indian, Black, and Hispanic and Other persons make up 9%, 1%, and 1% of the population respectively, they account for 17%, 22%, and 3% of cases diagnosed with AIDS within one year of their initial HIV diagnosis between 1996 and 2005. Of American Indian, Black, Hispanic and Other, and White persons diagnosed with HIV/AIDS between 1996 and 2005, 23%, 35%, 20%, and 31%, respectively were diagnosed with AIDS within 1 year of HIV diagnosis.

OTHER DATA SOURCES

This section includes the YRBS, BRFSS, and unmet need for medical care.



Youth Risk Behavior Surveillance (YRBS), 2005[13, 14]

The YRBS is a biannual high school questionnaire that assesses six health risk behaviors: (1) behaviors that result in unintentional and intentional injuries, (2) alcohol and other drug use, (3) tobacco use, (4) sexual behaviors that result in HIV infection, other sexually transmitted diseases, and pregnancy, (5) dietary behaviors, (6) and physical activity. The YRBS is developed by the CDC and state Department of Education. The YRBS is conducted nationally and South Dakota has participated since 1991. In 2005, 1,590 students from 22 South Dakota schools completed usable questionnaires. The sample was comprised of 50.6% males and 49.4% females. The race/ethnicity breakdown was 82.6% White, 13.6% Native American, and 3.8% Other.

Table 19. HIV/AIDS Risk Behaviors of South Dakota Students by Grade Level and Sex, YRBS 2005

	9th Grade		10th Grade		11th Grade		12th Grade	
	Females	Males	Females	Males	Females	Males	Females	Males
Ever had sexual intercourse	28%	32%	44%	37%	54%	47%	63%	53%
Had sexual intercourse before age 13	5%	12%	5%	4%	2%	11%	1%	4%
Had sex with ≥ 4 people	6%	7%	16%	10%	21%	14%	26%	16%
Had sex with ≥ 1 person in the past 3 months	17%	23%	33%	23%	33%	31%	53%	39%
Never taught about HIV/AIDS infection in school	16%	19%	10%	13%	8%	13%	11%	19%
Ever used a needle to inject an illegal drug	1%	7%	5%	0%	3%	2%	1%	4%

Table 20. HIV/AIDS Risk Behaviors of South Dakota Students by Sex, YRBS 1997-2005

	1997		1999		2001		2003		2005	
	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males
Ever had sexual intercourse	43%	39%	44%	44%	38%	42%	43%	40%	47%	41%
Had sexual intercourse before age 13	4%	6%	3%	6%	2%	5%	2%	6%	4%	8%
Had sex with ≥ 4 people	14%	13%	12%	13%	10%	13%	9%	14%	17%	11%
Had sex with ≥ 1 person in the past 3 months	30%	27%	33%	30%	30%	29%	32%	28%	34%	29%
Alcohol or drug use before last sexual intercourse*	33%	37%	29%	34%	27%	30%	32%	36%	26%	36%
Did Not use a condom during last sexual intercourse*	48%	43%	45%	38%	46%	37%	45%	30%	46%	39%
No HIV/AIDS education in school	6%	8%	9%	12%	11%	15%	11%	13%	11%	16%
Ever used a needle to inject an illegal drug	2%	4%	1%	4%	7%	7%	1%	3%	2%	3%

*Respondents to this question had sexual intercourse during the past 3 months.

The Youth Risk Behavior Surveillance report allows assessment of risk behaviors in South Dakota high school students. Of South Dakota high school students participating in the 2005 YRBS,

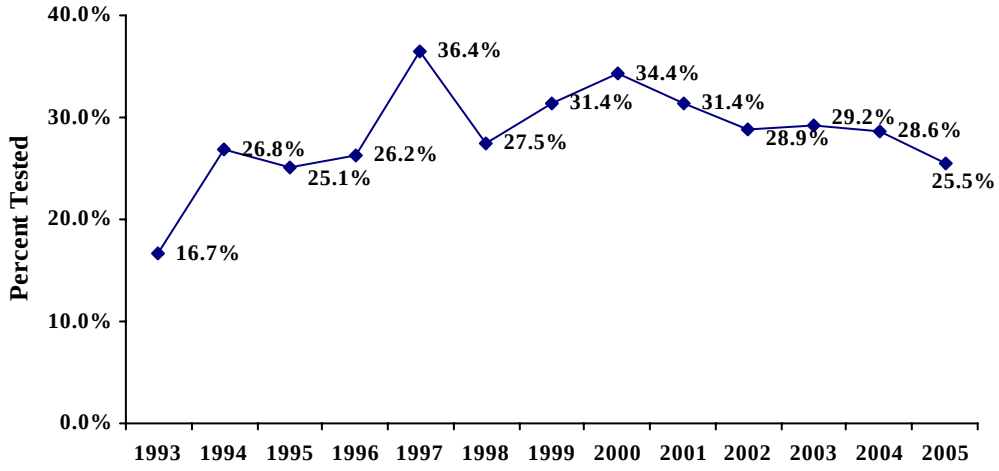
- 44% ever had sexual intercourse
- 31% had sexual intercourse with one or more persons during the past 3 month
- 6% had sexual intercourse prior to age 13
- 14% had sexual intercourse with four or more people during their life
- 31% of those who had sexual intercourse during the past 3 months drank alcohol or used drugs before last sexual intercourse
- 43% of those who had sexual intercourse during the past 3 months did NOT use a condom during last intercourse
- 14% had NOT been taught about AIDS or HIV infection in school
- 3% had ever injected any illegal drugs during their lifetime

South Dakota had the highest percentage in the country of drug or alcohol use before sexual intercourse for males and the second highest percentage among females. South Dakota's total rate was highest in the country. The percentage of South Dakota high school students who were NOT taught about AIDS or HIV infection in school was higher than the national average. The percentage of South Dakota female high school students who have ever had sexual intercourse is higher than the national average. The percentage of South Dakota female high school students who have had sexual intercourse with four or more persons is above the national average. The percentage of sexually active South Dakota high school students who did NOT use a condom during their last sexual intercourse is greater than the national average. The percentage of South Dakota high school students that ever injected an illegal drug is higher than the national average[15].

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)[16]

The BRFSS is the world's largest telephone survey, administered to households with individuals 18 years or older. The survey consists of questions aimed at tracking and trending prevalence of health behaviors and conditions over time, including being tested for HIV. The BRFSS survey is conducted in all 50 states. In South Dakota 6,915 individuals completed the telephone interview in 2005.

Figure 52. Percent BRFSS Respondents, Ages 18-64, Who Have Been Tested for HIV, South Dakota 1993-2005



In 2005, 25.5% of 4,652 BRFSS respondents had ever been tested for HIV. The percentage of respondents being tested for HIV has been decreasing since 2000.

Sex

There is no significant sex difference in regard to having ever been tested for HIV. However, males in the 18-24 age group (12.4%) are less likely to have been tested for HIV than females of the same age (29.2%).

Age

The prevalence of persons having an HIV test varies greatly by age. Those in the 25-34 age group are more likely to have had an HIV test and this prevalence is significantly higher than those in the 18-24 age group. Each age group after 25-34 is decreasingly likely to have been tested for HIV.

Table 21. Percent BRFSS Respondents Tested for HIV by Age, 2005

	Total		Male		Female	
Age	Respondents	Percent	Respondents	Percent	Respondents	Percent
18-24 years	306	20.6%	119	12.4%	187	29.2%
25-34 years	831	42.4%	350	38.4%	481	46.6%
35-44 years	1,088	31.6%	478	35.6%	610	27.5%
45-54 years	1,305	18.2%	599	17.0%	706	19.4%
55-64 years	1,122	11.6%	486	14.3%	636	8.9%
Total	**4,652**	**25.5%**	**2,032**	**24.3%**	**2,620**	**26.7%**

Race

Whites are much less likely than American Indians to have been tested for HIV.

Table 22. Percent BRFSS Respondents Tested for HIV by Race, 2005

	Total		Male		Female	
Race	Respondents	Percent	Respondents	Percent	Respondents	Percent
White	4,094	23.6%	1,801	22.6%	2,293	24.6%
American Indian	390	41.9%	160	36.8%	230	46.7%

Region

The northeast and central regions have a low HIV test prevalence, while the west and American Indian counties regions show a high prevalence of HIV testing. Note that the Public Health Regions are different from the HIV Planning Regions.

Table 23. Percent BRFSS Respondents Tested for HIV by Region, 2005

	Total		Male		Female	
BRFSS Region	Respondents	Percent	Respondents	Percent	Respondents	Percent
Southeast Region	1,074	25.6%	469	24.0%	605	27.4%
Northeast Region	1,004	20.2%	416	20.5%	588	19.9%
Central Region	896	17.6%	419	15.5%	477	19.8%
West Region	1,155	32.6%	496	31.6%	659	33.7%
American Indian County Region	523	31.6%	232	27.3%	291	36.5%

Household Income

The prevalence of HIV testing is much lower for those in the higher income groups. This includes a significant decrease in the prevalence as the $20,000-$24,999 income group is reached.

Table 24. Percent BRFSS Respondents Tested for HIV by Income, 2005						
	Total		Male		Female	
Household Income	Respondents	Percent	Respondents	Percent	Respondents	Percent
Less than $10,000	218	40.1%	*	*	*	*
$10,000-$14,999	185	35.8%	*	*	*	*
$15,000-$19,999	234	37.9%	*	*	*	*
$20,000-$24,999	374	24.2%	144	14.7%	230	31.2%
$25,000-$34,999	631	25.2%	281	24.6%	350	25.8%
$35,000-$49,999	967	25.7%	423	25.0%	544	26.3%
$50,000-$74,999	886	26.9%	420	28.7%	466	24.8%
$75,000+	758	23.2%	395	21.9%	363	25.2%
*Results based on sample sizes less than 100 have been suppressed.						

Education

Among males, HIV testing increases with educational level.

Table 25. Percent BRFSS Respondents Tested for HIV by Education Level, 2005						
	Total		Male		Female	
Education	Respondents	Percent	Respondents	Percent	Respondents	Percent
Some High School	234	24.6%	113	17.7%	121	33.9%
High School or G.E.D.	1,325	21.1%	646	19.8%	679	22.6%
Some Post High School	1,461	27.7%	587	27.2%	874	28.0%
College Graduate	1,567	27.3%	645	27.1%	922	27.5%

Employment Status

Those who are self-employed, a student, or retired demonstrate a lower prevalence of HIV testing, while those who are a homemaker or unable to work show a higher prevalence.

Table 26. Percent BRFSS Respondents Tested for HIV by Employment Status, 2005						
	Total		Male		Female	
Employment Status	Respondents	Percent	Respondents	Percent	Respondents	Percent
Employed for Wages	3,035	25.3%	1,278	25.0%	1,757	25.6%
Self-employed	697	23.4%	456	21.2%	241	28.0%
Unemployed	153	29.6%	*	*	*	*
Homemaker	229	30.6%	*	*	*	*
Student	123	22.0%	*	*	*	*
Retired	189	16.0%	*	*	*	*
Unable to Work	224	38.5%	*	*	*	*
*Results based on sample sizes less than 100 have been suppressed.						

Marital Status

Those who are divorced or separated exhibit a significantly higher prevalence of HIV testing than all other categories of marital status

Table 27. Percent BRFSS Respondents Tested for HIV by Marital Status, 2005						
	Total		Male		Female	
Marital Status	Respondents	Percent	Respondents	Percent	Respondents	Percent
Married/Unmarried Couple	3,044	25.6%	1,328	25.6%	1,716	25.5%
Divorced/Separated	732	37.7%	309	32.1%	423	42.3%
Widowed	154	15.6%	*	*	*	*
Never Married	718	20.5%	363	17.9%	355	24.4%
*Results based on sample sizes less than 100 have been suppressed.						

Further Analysis

Following are data illustrating the percent of those who have never been tested for HIV for various health behaviors and conditions. For example, while 41.1% of respondents who stated they are a military veteran have ever been tested for HIV, 23.2% of non-veterans stated they have been tested[16].

Table 28. Tested for HIV for Selected Health Behaviors and Conditions, BRFSS 2005

Health Behavior or Condition	# Respondents	% Tested for HIV
Fair or Poor Health Status	497	*32.4%
Excellent, Very Good, or Good Health Status	4,152	*24.8%
Physical Health Not Good for 30 days of the past 30	245	30.6%
Physical Health Not Good for 0-29 days of the past 30	4,388	25.3%
Mental Health Not Good for 20-30 days of the past 30	279	*40.0%
Mental Health Not Good for 0-19 days of the past 30	4,351	*24.6%
Usual Activities Unattainable for 10-30 Days of the Past 30	263	*36.9%
Usual Activities Unattainable for 0-9 Days of the Past 30	4,373	*24.9%
Dissatisfied / Very Dissatisfied with Life	196	*37.7%
Satisfied / Very Satisfied with Life	4,413	*24.8%
Obese (BMI = 30.0+)	1,300	22.8%
Overweight (BMI = 25.0-29.9)	1,640	26.8%
Recommended Weight (BMI = 18.5-24.9)	1,492	26.3%
No Moderate Physical Activity	2,312	24.6%
Moderate Physical Activity	2,221	27.0%
No Vigorous Physical Activity	3,518	24.6%
Vigorous Physical Activity	1,081	28.0%
Not Heard of "Healthy South Dakota" Program	3,143	25.1%
Heard of "Healthy South Dakota" Program	1,401	25.6%
Current Smoker	1,065	33.7%
Former Smoker	1,108	28.6%
Never Smoked	2,470	*20.9%
Drank Alcohol in Past 30 Days	2,805	25.2%
No Alcohol in Past 30 Days	1,838	26.1%
Binge Drinker	825	26.4%
Not a Binge Drinker	3,776	25.4%
Hypertension	1,045	23.5%
No Hypertension	3,607	25.9%
High Blood Cholesterol	1,110	23.8%
No High Blood Cholesterol	2,378	28.3%
No Health Insurance (18-64)	410	25.3%
Health Insurance (18-64)	4,155	25.6%
Employer Based Health Insurance Coverage (18-64)	2,728	23.2%
Private Health Insurance Plan (18-64)	630	16.3%
Medicare (18-64)	143	29.8%
Medicaid or Medical Assistance (18-64)	173	*52.9%
The Military, CHAMPUS, TriCare, or the VA (18-64)	205	*53.4%
The Indian Health Service (18-64)	225	34.3%
Diabetes	270	21.9%
No Diabetes	4,382	25.6%
Previously Had a Heart Attack	120	26.1%
Never Had a Heart Attack	4,516	25.5%
Have Angina or Coronary Heart Disease	127	28.9%
Do Not Have Angina or Coronary Heart Disease	4,501	25.4%
Never Had a Stroke	4,581	25.5%
Physical, Mental, or Emotional Disability	824	*31.8%
No Physical, Mental, or Emotional Disability	3,824	*24.3%
Military Veteran	599	41.1%
Not a Military Veteran	4,051	23.2%

*Denotes significant differences between 95% Confidence Intervals.

UNMET NEED FOR MEDICAL CARE

Table 29. Unmet Need for Medical Care for Persons Living with HIV or AIDS South Dakota, 2006		
	Percent in Care[a]	**Percent not in Care**
Overall	**61%**	**39%**
Persons living with HIV	56%	44%
Persons living with AIDS	67%	33%
Sex		
Male	57%	43%
Female	69%	31%
Race		
American Indian	67%	33%
Black	65%	35%
Hispanic/Other	57%	43%
White	58%	42%
Age Group		
<13 years	40%	60%
13-19 years	50%	50%
20-29 years	70%	30%
30-39 years	61%	39%
40+ years	59%	41%
HIV Planning Region		
American Indian	54%	46%
Black Hills	50%	50%
Central	9%	91%
Northeast	71%	29%
Southeast	64%	36%
a. Due to rounding, percentages may not add up to 100% b. Hispanic/Other refers to individuals who are Asian, Hispanic, or Multi-race.		

In South Dakota, HIV and AIDS are reportable events, CD4 counts and viral loads, however, are not legally reportable.

Laboratory data can be used to assess whether a person is in care or not in care during a specified time.

Individuals who had no laboratory tests performed in 2006 or who were not enrolled in Ryan White Part B/ADAP were considered to be individuals who had no medical care in 2006.

Of the individuals living with HIV/AIDS in South Dakota at the end of 2006, 61% had at least one CD4/viral load test or were enrolled in the Ryan White Part B/ADAP program and were considered to have received primary medical care. Individuals with AIDS were more likely to be in care than individuals with HIV.

Unmet need was higher in males compared to females. Hispanic persons were less likely to be in care than whites, blacks or American Indians.

The Central region had the highest percentage of persons not in care, and the Northeast region had the lowest percentage of persons not in care in 2006, which may be due to the location of HIV Priority doctors within the state.

TECHNICAL NOTES

Interpretation of HIV Detection Data

Treatment regimens are initiated at earlier stages of HIV infection than in the past. These therapies postpone the onset of AIDS, resulting in a decrease in AIDS incidence. Therefore, recent AIDS incidence data can no longer provide accurate HIV transmission estimates and trends. Surveillance data now places an emphasis on the representation of HIV-positive persons. Throughout this report, all AIDS data are depicted by characteristics at year of AIDS diagnosis under the 1993 AIDS case definition, whereas HIV data are characterized at year of HIV diagnosis.

HIV detection data are not without limitations. Although HIV detection is usually closer in time to HIV infection than is an AIDS diagnosis, data represented by the time of HIV detection must be interpreted with caution. HIV data may not accurately depict trends in HIV transmission because HIV data represent persons who were reported with a positive confidential HIV test, which may first occur several years after HIV infection.

HIV detection data do not necessarily represent characteristics of persons who have been recently infected with HIV nor do they provide true HIV incidence. Demographic and geographic subpopulations are disproportionately sensitive to differences and changes in access to health care, HIV testing patterns, and targeted prevention programs and services. All of these issues must be considered when interpreting HIV data.

Definitions of the Exposure Categories

For the purposes of this report, HIV/AIDS cases were placed in one of several risk categories, based on information collected. Persons with more than one reported mode of exposure to HIV were assigned to the category that presented the greatest risk. Definitions are as follows:

- **Men who have Sex with Men (MSM):** Cases include men who report sexual contact with other men, i.e. homosexual contact or bisexual contact.
- **Injection Drug User (IDU):** Cases who report using illegal drugs that require injection.
- **High-Risk Heterosexual Contact (HRH):** Cases who report specific heterosexual contact with a person who has HIV or is at increased risk for HIV infection, e.g., heterosexual contact with a homosexual or bisexual man, heterosexual contact with an injection drug user, and/or heterosexual contact with a person known to be HIV-infected.
- **Perinatal/Pediatric:** HIV infection in children that results from transmission from an HIV-infected mother to her child. Please note that pediatric hemophilia was included in this category.
- **Transfusion/Hemophilia:** Cases who report receiving a transfusion of blood or blood products prior to 1985.
- **Unspecified:** Cases who, at the time of this publication, have no known history of exposure to HIV. "Unspecified" cases include: persons for which the surveillance protocols to document the risk behavior information have not yet been completed and are still under investigation; persons whose exposure history is incomplete because they have died, declined risk disclosure, or were lost to follow-up; persons who deny any risk behavior; and persons who do not know the HIV infection status or risk behaviors of their sexual partners.

Definitions of Facility of Diagnosis

- **Private:** Cases that are listed as diagnosed by a physician, Health Maintenance Organization (HMO), in a hospital as an inpatient or outpatient, or in an emergency room.
- **Public:** Cases that are listed as diagnosed in an STD Clinic, HIV Counseling and Testing Site, or Community Health Center.

Case Definition Changes

The CDC AIDS case definition has changed over time based on knowledge of HIV disease and physician practice patterns. The original definition was modified in 1985[17]. In 1987, definition revisions incorporated a broader range of AIDS opportunistic infections and conditions and used HIV diagnostic tests to improve the sensitivity and specificity of the definition[18]. In 1993, the definition expanded to include HIV-infected individuals with pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer, or CD4 T-lymphocyte counts of less than 200 cells per ml or a CD4+ percentage of less than 14[19]. As a result of the 1993, definition expansion, HIV-infected persons were classified as AIDS earlier in their course of disease than under the previous definition. Regardless of the year, AIDS data are tabulated in this report by the date of the first AIDS defining condition in an individual under the 1993 case definition.

The case definition for HIV infection was revised in 1999 to include positive results or reports of detectable quantities of HIV virologic (non-antibody) tests[20] (See Appendix 2). The revisions to the 1993 surveillance definition of HIV include additional laboratory evidence, specifically detectable quantities from virologic tests. The perinatal case definition for infection and remission of symptoms among children less than 18 months of age who are perinatally-exposed to HIV was changed to incorporate the recent clinical guidelines and the sensitivity and specificity of current HIV diagnostic tests in order to more efficiently classify HIV-exposed children as infected or non-infected.

Abbreviations:

ADAP: AIDS Drug Assistance Program
AIDS: Acquired Immunodeficiency Syndrome
BRFSS: Behavioral Risk Factor Surveillance System
CD4 Cells: Cells that have molecules called CD4 on their surface and start the immune response that protects the body from infectious invaders such as bacteria and viruses.
CDC: Centers for Disease Control and Prevention
CSTE: Council of State and Territorial Epidemiologists
DOH: Department of Health
HIV: Human Immunodeficiency Virus
HRH: High-Risk Heterosexual
IDU: Intravenous Drug Use
MSM: Men who have Sex with Men
STD: Sexually Transmitted Disease
YRBS: Youth Risk Behavior Surveillance

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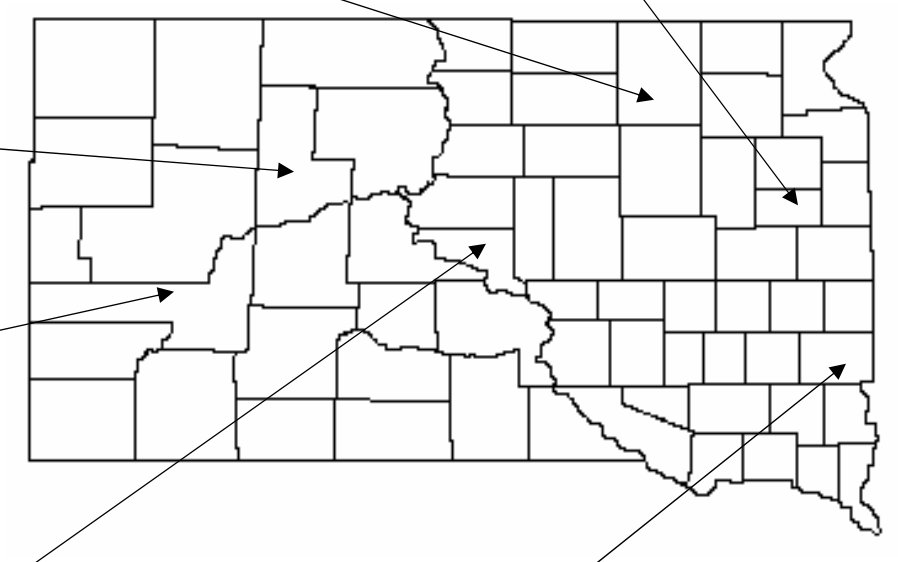
South Dakota Department of Health
HIV/AIDS Prevention Program
615 East 4th Street
Pierre, South Dakota 57501
605-773-3737 or 800-592-1861

Department of Health Regional Confidential HIV Testing Centers
For testing and counseling for HIV/AIDS and other sexually transmitted diseases, contact one of the following sites or call **1-800-592-1871**.

Aberdeen
402 S. Main St.
Aberdeen, SD 57401-4127
605-626-2373
1-866-805-1007

Watertown
913 5th St. SE
Watertown, SD 57201-5134
605-882-5096
1-866-817-4090



Dupree
Ziebach County Court House
Dupree, SD 57623-0068
605-365-5164

Rapid City
909 E. St. Patrick, Suite 7
Rapid City, SD 57701
605-394-2289
1-866-474-8221

Pierre
302 E. Dakota
Pierre, SD 57501-3133
605-773-5348
1-866-229-4927

Sioux Falls
1200 N. West Ave.
Sioux Falls, SD 57104
605-367-5365
1-866-315-9214

National AIDS Hotline 1-800-342-2437

Revised CSTE/CDC Surveillance Case Definition for HIV Infection

***Source: MMWR 1999*, 48(RR13); 29-31.** Also available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4813a2.htm

This revised definition of HIV infection, which applies to any HIV (e.g., HIV-1 or HIV-2), is intended for public health surveillance only. It incorporates the reporting criteria for HIV infection and AIDS into a single case definition. The revised criteria for HIV infection update the definition of HIV infection implemented in 1993; the revised HIV criteria apply to AIDS-defining conditions for adults and children, which require laboratory evidence of HIV. This definition is not presented as a guide to clinical diagnosis or for other uses.

I. In adults, adolescents, or children aged greater than or equal to 18 months, a reportable case of HIV infection must meet at least one of the following criteria:**

Laboratory Criteria

Positive result on a screening test for HIV antibody (e.g., repeatedly reactive enzyme immunoassay), followed by a positive result on a confirmatory (sensitive and more specific) test for HIV antibody (e.g., Western blot or immunofluorescence antibody test)

or

Positive result or report of a detectable quantity on any of the following HIV virologic (nonantibody) tests: HIV nucleic acid (DNA or RNA) detection (e.g., DNA polymerase chain reaction [PCR] or plasma HIV-1 RNA); HIV p24 antigen test, including neutralization assay; HIV isolation (viral culture).

OR

Clinical or Other Criteria (if the above laboratory criteria are not met)

Diagnosis of HIV infection, based on the laboratory criteria above, that is documented in a medical record by a physician

or

Conditions that meet criteria included in the case definition for AIDS

II. In a child aged less than 18 months, a reportable case of HIV infection must meet at least one of the following criteria:

Laboratory Criteria

Definitive

Positive results on two separate specimens (excluding cord blood) using one or more of the following HIV virologic (nonantibody) tests: HIV nucleic acid (DNA or RNA) detection; HIV p24 antigen test, including neutralization assay, in a child greater than or equal to 1 month of age; HIV isolation (viral culture).

or

Presumptive

A child who does not meet the criteria for definitive HIV infection but who has:

Positive results on only one specimen (excluding cord blood) using the above HIV virologic tests and no subsequent negative HIV virologic or negative HIV antibody tests

OR

Clinical or Other Criteria (if the above definitive or presumptive laboratory criteria are not met)

Diagnosis of HIV infection, based on the laboratory criteria above, that is documented in a medical record by a physician

or

Conditions that meet criteria included in the 1987 pediatric surveillance case definition for AIDS

III. A child aged less than 18 months born to an HIV-infected mother will be categorized for surveillance purposes as "not infected with HIV" if the child does not meet the criteria for HIV infection but meets the following criteria:

Laboratory Criteria

Definitive

At least two negative HIV antibody tests from separate specimens obtained at greater than or equal to 6 months of age

or

At least two negative HIV virologic tests* from separate specimens, both of which were performed at greater than or equal to 1 month of age and one of which was performed at greater than or equal to 4 months of age

AND

No other laboratory or clinical evidence of HIV infection (i.e., has not had any positive virologic tests, if performed, and has not had an AIDS-defining condition)

or

Presumptive

A child who does not meet the above criteria for definitive "not infected" status but who has:

One negative EIA HIV antibody test performed at greater than or equal to 6 months of age and NO positive HIV virologic tests, if performed

or

One negative HIV virologic test* performed at greater than or equal to 4 months of age and NO positive HIV virologic tests, if performed

or

One positive HIV virologic test with at least two subsequent negative virologic tests, at least one of which is at greater than or equal to 4 months of age; or negative HIV antibody test results, at least one of which is at greater than or equal to 6 months of age

AND

No other laboratory or clinical evidence of HIV infection (i.e., has not had any positive virologic tests, if performed, and has not had an AIDS-defining condition).

OR

Clinical or Other Criteria (if the above definitive or presumptive laboratory criteria are not met)

Determined by a physician to be "not infected", and a physician has noted the results of the preceding HIV diagnostic tests in the medical record

AND

NO other laboratory or clinical evidence of HIV infection (i.e., has not had any positive virologic tests, if performed, and has not had an AIDS-defining condition)

IV. A child aged less than 18 months born to an HIV-infected mother will be categorized as having perinatal exposure to HIV infection if the child does not meet the criteria for HIV infection (II) or the criteria for "not infected with HIV" (III).